Perceptions and Public Trust in Vaccines

Heidi J Larson, PhD
Institute for Global Health
Imperial College London

European Immunization Week
European Parliament      Brussels      28 April 2010
The history of public questioning of vaccines is as old as vaccines
The Vaccination Monster (London, 1808)
Anti-Compulsory Vaccination League -
1878

THE NATIONAL
ANTICOMPULSORY-VACCINATION
REPORTER.

"Only by the most resolute resistance will legislators be brought to realize into what frightful
injustice and inhumanity they have suffered themselves to be betrayed by a domineering Trades'
Union, which, although it lives upon the diseases of mankind, has yet, with comical simplicity, been
constituted guardian of the public health; 'the goat,' to use a German proverb, 'being thus appointed
head gardener.'"—Count Zedelins.

Vol. III, No. 4.]

JANUARY 1, 1879. [Published Monthly.

The Exceeding Wickedness of the Compul-
sory Vaccination Law, and of other
Medical Legislation connected with it,
for experience, for contagion to spread there must be
communication between persons either by exhal-
ations from the body or by actual contact. Five or
six feet would be the utmost limit of distance over which
contagion would spread. He knew of no case in
which a doctor had conveyed contagion from a
Today

Virtue Junkies
Mass immunization campaigns are provoking unprecedented criticism

Larson/ Vaccines and Public Trust
Autism ‘linked to mercury vaccine’

MERCURY in vaccines for babies and infants could be the cause of a steep rise in cases of autism in children around the world, according to a growing scientific concern — a substance known to have neurotoxic effects, especially in infants whose brains are still developing. Symptoms are similar to those displayed by autistic individuals, including an inability to communicate or interact socially, along with repetitive patterns of behaviour.

Rosie Waterhouse

With a growth in the number of inoculations given to young children, a new study has been released suggesting a possible link between mercury exposure and the development of autism.

1. Autistic children may be genetically predisposed to the syndrome.
2. Babies under six months receive several vaccines containing the preservative thiomersal, which is 49.6% mercury.
3. The cumulative effect of mercury could impair brain development and damage the immune system. The MMR vaccine at about 18 months could be the final trigger.
4. A new study shows that in 99% of autistic patients a family of proteins essential for cleansing the body of mercury is missing or ‘disabled’.
Who is not trusting?

Parents
Some physicians
Politicians
would expand "physicians" to health workers" or even more directly add "including immunization providers"
Why?

- Vaccine safety concerns (with or without an AEFI)
- Vaccine relevance questions (*why do we need this, disease is over?*)
- Questioning about the vaccine is not really about the vaccine—there are other underlying issues
assuming "vaccine relevance" to include (a) group of persons who do not see themselves at risk for the specific VPD, and (b) those who know/acknowledge they have some risk but prefer to e.g., get the disease in order to develop protection (varicella parties etc.). Latter group important as may have no safety concerns per se but different philosophy.
DO NOT ASSUME COMMUNICATIONS WILL FIX THE PROBLEM WITHOUT UNDERSTANDING THE PROBLEM
From crisis management to pre-empting problems

There are a number of know prompters of public questioning—we need to increase our “listening” to the public during those times.

There are a number of amplifying factors which also need our attentiveness to avert programme disruptions BEFORE they happen.
Prompters of Public Questioning

- **Adverse Event** (AEFI) – local AEFI are usually stronger prompters of rumors, but a distant event reported can also spread and provoke questions
- **New research** reported
- **New recommendation or policy change**
- **New product** (introduction of new product or product packaging)
- **Political motivations** (i.e. purposefully spreading rumors to undermine the government, other providers or producers of the vaccine)
New "programs" incl. new funding mechanism or project for vaccination OR "new" (reinforcing messages about need to monitor) OR new regulatory mechanisms (e.g., why is vaccine X not used in the country where it is produced) have all led to questioning.
The precautionary principle

Good intentions, misunderstood perceptions

Larson/ Vaccines and Public Trust
An “honest response”* to Incomplete Science unintended, negative consequences

Impact of Thimerosal on Hepatitis B vaccine uptake

FIGURE 2. Number of children who received first dose of Hepatitis B vaccine ≤5 days after birth — United States, 1999-2000

Larson/ Vaccines and Public Trust
Amplifying factors

- **Geographic spread** of rumor (ie. how far)
- **Frequency of rumor reported** – occasional reporting vs. persisting and strengthening
- **Media reports** that amplify any prompter listed in column one
Amplifying factors (cont.)

- **Historic bad experience that lowers public trust** (e.g. forced sterilization in India, Nigeria clinical trial which caused childhood deaths)

- **Socio-economic marginalization** (i.e. populations that have historically been marginalized with lower access to health services breeds general distrust in “the system”)

- **Previous self-organized community groups** that can re-purpose their experience to address vaccine concerns
Potential Consequences of not addressing public questions

- **Vaccine refusals** (individual ↔ group level)

- **Vaccine is withdrawn** (This can be a prompter of rumors as well as a consequence of rumors)

- **Vaccine preventable disease outbreaks**
Resilience measures

**Increase allocated time and budgets** for campaigns and delivery in known difficult populations and in know high-risk times (as outlined earlier)

**Do not wait to address public questioning** until it becomes a big issue, address early

**Be pro-active, not reactive** – do early risk assessments to anticipate where programmes may face questions/problems
Building public trust

…and managing trust breakdowns
Communication on H1N1 vaccine safety

- **Anticipate the issues:**
  - Be ready with Q&A and information documents.

- **Ensure consistency of messages** within and across organizations.

- **Acknowledge known risks**

- **Explain safety monitoring** and investigation systems

- Address public questions with clear facts and simple messages.
Public Health Response to Influenza A(H1N1) as an Opportunity to Build Public Trust

Heidi J. Larson, PhD
David L. Heymann, MD

In June 2009, the World Health Organization (WHO) declared the 2009 influenza A(H1N1) pandemic and in October 2009, President Obama declared it a national emergency. The influenza A(H1N1) virus is being monitored around the world for changes in virulence or epidemiology. There has been a push to have vaccines ready, yet vaccine supply may be insufficient in some areas. The public wants to be assured that there is enough vaccine, but at the same time, some are questioning the safety and effectiveness of the vaccine. It is a time of uncertainty but for claims about autism being related to vaccines were unfounded, historic levels of distrust, compounded by massive media coverage that amplified the unproven links between the MMR vaccine and bowel disease, played a role in contributing to lower vaccine coverage and consequent disease outbreaks.

In France, public trust in hepatitis B vaccine plummeted after the government's precautionary decision to stop the school vaccination program because of suspected, but not proven, links with multiple sclerosis, despite recommendations by WHO and French pediatricians to continue the program. This followed concerns over the French government's management of the human immunodeficiency virus (HIV) vaccine in 1999.
I. Prevaccine
II. Increasing coverage
III. Loss of confidence
IV. Resumption of confidence

- Disease
- Vaccination Coverage
- Outbreak
- Adverse events
Disease

Prevaccine

II
Increasing coverage

III
Loss of confidence

IV
Resumption of confidence

Rumours / media event
Disease

Prevaccine

Increasing Coverage

Loss of confidence

Resumption of confidence

Crisis
communication

INCIDENCE

Vaccination Coverage

TIME
Disease Incidence

Vaccination Coverage

TIME

I. Prevaccine

II. Increasing Coverage

III. Loss of confidence

IV. Resumption of confidence

Increased need of evidence-based information / education

Adapted from J. Bonhoeffer et al.
Listen and speak their language

“Don’t think of it as getting a flu shot. Think of it as installing virus protection software.”

Larson/ Vaccines and Public Trust