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CIRN
CANADIAN IMMUNIZATION RESEARCH NETWORK

Communication materials to enhance vaccine acceptance: Do existing tools adhere to best practices in risk communication?

A study by the Canadian Immunization Research Network (CIRN)

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Disclosure Statement

- I have no affiliation (financial or otherwise) with a pharmaceutical, medical device or communications organization.

Context

- Simply providing information, education and communicating evidence of vaccine safety and efficacy is not enough to address vaccine hesitancy
- Knowledge is important but not sufficient to change people's perception of vaccine risks
- Communicating both benefits and harms for informed decisions and establishing trust are critical factors in risk communication

The project

Objective:

- Collect and analyze existing Canadian childhood vaccination communication materials using risk communication criteria*

Methods:

- Scan of existing communication materials available from federal, provincial and local public health agencies, and medical associations in Canada
- Content analysis using N'Vivo
  - We assessed the degree to which these materials respected best practices in risk communication

*Council of Canadian Academies. Is the message getting through?: An expert panel report on health product risk communication Ottawa: Council of Canadian Academies, 2015

Results

If you choose not to vaccinate your child

Vaccination is the best way to protect your child against a number of serious and sometimes deadly diseases. If you choose not to vaccinate your child, or to delay vaccines, there can be risks.

It's important that all parents who choose not to vaccinate understand how to minimize the risk of their child getting a vaccine-preventable disease and spreading it to others.

Learn about your risks and responsibilities with an unvaccinated child.

, 20 videos, and 12 factsheets
analyzed

Decision Making
Includes factors that influence the
-making process such as
l responsibility, herd
ty, importance to respect
schedule, role of healthcare
provider.

Type of information

Myth: I'm breastfeeding, so my baby is protected from infections.

FACT: Breastfeeding is not a substitute for vaccination. Breastfeeding provides some protection against certain infections, especially viral respiratory infections, ear infections and diarrhea. But this protection is incomplete, temporary, and can be overcome if your baby is exposed to large amounts of a specific germ.

Addressing parental concern

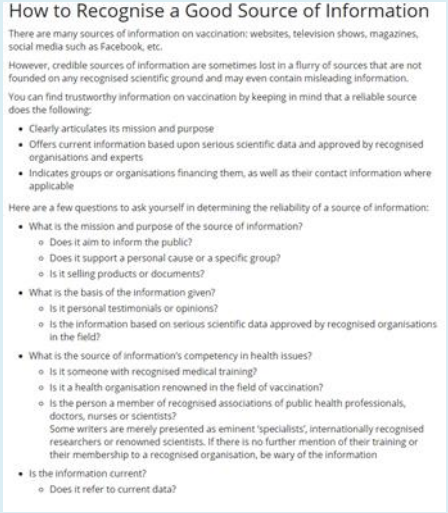
Immunization

Immunization is a way of providing protection against diseases caused by viruses or bacteria. A vaccine is a substance that stimulates the immune system to produce antibodies against a specific disease without getting the actual disease. Immunization helps to build immunity against communicable diseases that your body has trouble fighting on its own.

Saskatchewan Health Authority

Results

Mainly text –minority of materials used graphics or videos



How to Recognise a Good Source of Information

There are many sources of information on vaccination: websites, television shows, magazines, social media such as Facebook, etc.

However, credible sources of information are sometimes lost in a flurry of sources that are not founded on any recognised scientific ground and may even contain misleading information.

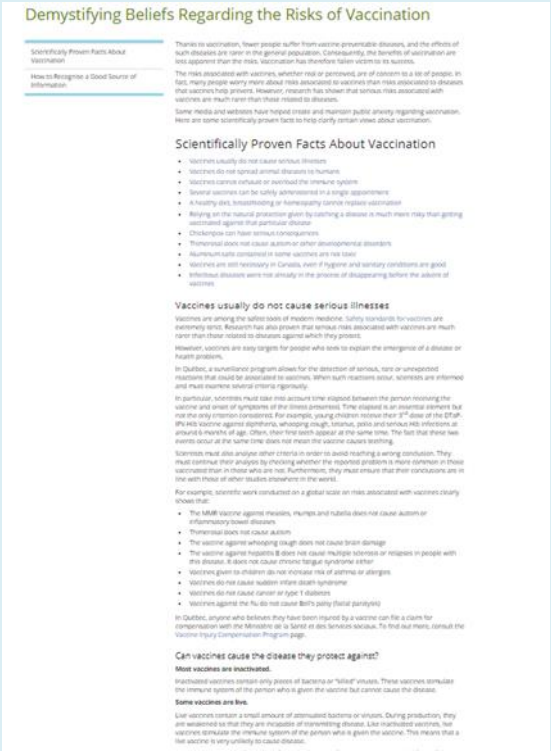
You can find trustworthy information on vaccination by keeping in mind that a reliable source does the following:

- Clearly articulates its mission and purpose
- Offers current information based upon serious scientific data and approved by recognised organisations and experts
- Indicates groups or organisations financing them, as well as their contact information where applicable

Here are a few questions to ask yourself in determining the reliability of a source of information:

- What is the mission and purpose of the source of information?
  - Does it aim to inform the public?
  - Does it support a personal cause or a specific group?
  - Is it selling products or documents?
- What is the basis of the information given?
  - Is it personal testimonials or opinions?
  - Is the information based on serious scientific data approved by recognised organisations in the field?
- What is the source of information's competency in health issues?
  - Is it someone with recognised medical training?
  - Is it a health organisation renowned in the field of vaccination?
  - Is the person a member of recognised associations of public health professionals, doctors, nurses or scientists?
    Some writers are merely presented as eminent 'specialists', internationally recognised researchers or renowned scientists. If there is no further mention of their training or their membership to a recognised organisation, be wary of the information
- Is the information current?
  - Does it refer to current data?

Portail santé mieux-être



Demystifying Beliefs Regarding the Risks of Vaccination

Scientifically Proven Facts About Vaccination

How to Recognise a Good Source of Information

Thanks to vaccination, fewer people suffer from vaccine-preventable diseases, and the effects of such diseases are rarer in the general population. Consequently, the benefits of vaccination are less apparent than the risks. Vaccination has therefore fallen victim to its success.

The risks associated with vaccines, whether real or perceived, are of concern to a lot of people. In fact, many people worry more about risks associated to vaccines than risks associated to diseases that vaccines help prevent. However, research has shown that serious risks associated with vaccines are much rarer than those related to diseases.

Some media and websites have helped create and maintain public anxiety regarding vaccination. Here are some scientifically proven facts to help clarify certain views about vaccination.

Scientifically Proven Facts About Vaccination

- Vaccines usually do not cause serious illnesses
- Vaccines do not spread animal diseases to humans
- Vaccines cannot exhaust or overload the immune system
- Several vaccines can be safely administered in a single appointment
- A healthy diet, breastfeeding or homeopathy cannot replace vaccination
- Relying on the natural protection given by catching a disease is much more risky than getting vaccinated against that particular disease
- Chickenpox can have serious consequences
- Thimerosal does not cause autism or other developmental disorders
- Aluminum salts contained in some vaccines are not toxic
- Vaccines are still necessary in Canada, even if hygiene and sanitary conditions are good
- Infectious diseases were not already in the process of disappearing before the advent of vaccines

Vaccines usually do not cause serious illnesses

Vaccines are among the safest tools of modern medicine. Safety standards for vaccines are extremely strict. Research has also proven that serious risks associated with vaccines are much rarer than those related to diseases against which they protect.

However, vaccines are easy targets for people who seek to explain the emergence of a disease or health problem.

In Québec, a surveillance program allows for the detection of serious, rare or unexpected reactions that could be associated to vaccines. When such reactions occur, scientists are informed and must examine several criteria rigorously.

In particular, scientists must take into account time elapsed between the person receiving the vaccine and onset of symptoms of the illness presented. Time elapsed is an essential element but not the only criterion considered. For example, young children receive their 3rd dose of the DTaP-IPV-Hib vaccine against diphtheria, whooping cough, tetanus, polio and serious Hib infections at around 6 months of age. Often, their first teeth appear at the same time. The fact that these two events occur at the same time does not mean the vaccine causes teething.

Scientists must also analyse other criteria in order to avoid reaching a wrong conclusion. They must continue their analysis by checking whether the reported problem is more common in those vaccinated than in those who are not. Furthermore, they must ensure that their conclusions are in line with those of other studies elsewhere in the world.

For example, scientific work conducted on a global scale on risks associated with vaccines clearly shows that:

- The MMR vaccine against measles, mumps and rubella does not cause autism or inflammatory bowel diseases
- Thimerosal does not cause autism
- The vaccine against whooping cough does not cause brain damage
- The vaccine against hepatitis B does not cause multiple sclerosis or relapses in people with this disease. It does not cause chronic fatigue syndrome either
- Vaccines given to children do not increase risk of asthma or allergies
- Vaccines do not cause sudden infant death syndrome
- Vaccines do not cause cancer or type 1 diabetes
- Vaccines against the flu do not cause Bell's palsy (facial paralysis)

In Québec, anyone who believes they have been injured by a vaccine can file a claim for compensation with the Ministère de la Santé et des Services sociaux. To find out more, consult the Vaccine Injury Compensation Program page.

Can vaccines cause the disease they protect against?

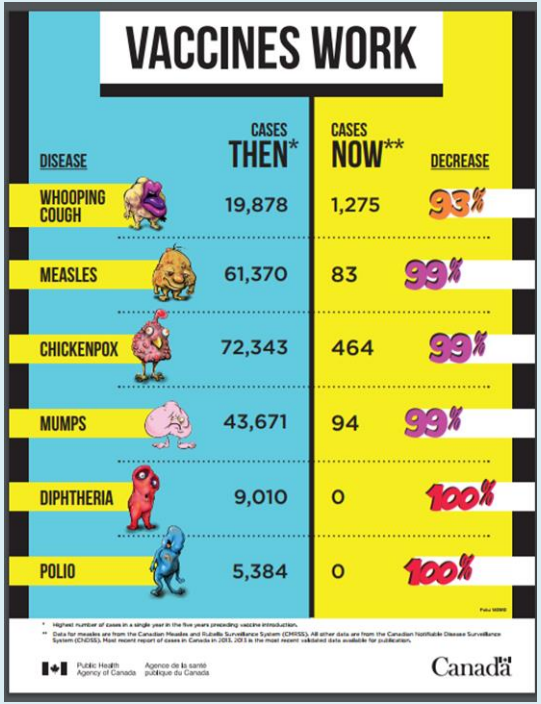
Most vaccines are inactivated.

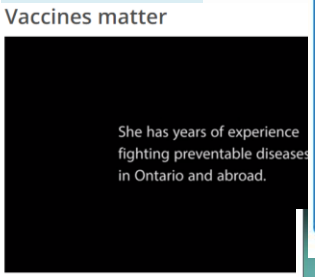
Inactivated vaccines contain only pieces of bacteria or "killed" viruses. These vaccines stimulate the immune system of the person who is given the vaccine but cannot cause the disease.

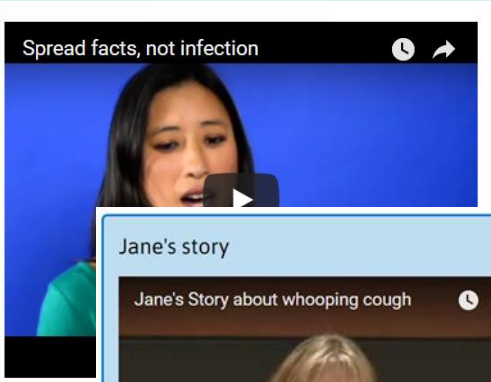
Some vaccines are live.

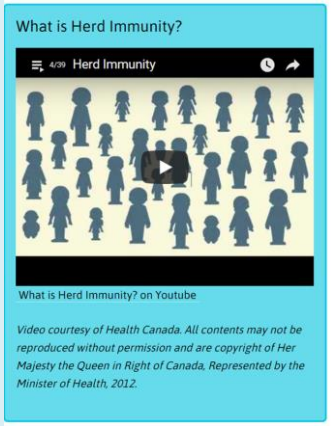
Live vaccines contain a small amount of attenuated bacteria or viruses. During production, they are weakened so that they are incapable of transmitting disease. Like inactivated vaccines, live vaccines stimulate the immune system of the person who is given the vaccine. This means that a live vaccine is very unlikely to cause disease.

Infographics









Government of Ontario

Objectives of videos:

Animation : explicative

Expert : Informative/Explicative

Testimony : Emotionnal

Testimonies – old videos with suboptimal quality

Other pictures

Pictures for pain management explanation

- General picture to improve visual content of the tool, not related to vaccination
- Pictures to support explanation of techniques

Results

Mainly qualitative information about risk

FACT # 2
VACCINES ARE SAFE

Vaccines used in Canada are safe and effective.

ARE VACCINES SAFE?

The vaccines your child receives when you bring him or her to be immunized here in Alberta, are safe. These vaccines protect your child from diseases that are definitely not safe.

Vaccines are among the safest tools of modern medicine.

It's important to remember that a choice not to vaccinate is not a risk-free choice. By not vaccinating, you are trading a small risk for a much more serious risk. Learn more .

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Portail santé Mieux-Être, Québec

To quantify risk, probabilities weren't used most of the time

Results

IF VACCINES ARE NOT 100% EFFECTIVE, WHY SHOULD I GET MY CHILD VACCINATED?

Most vaccines will protect between 90% and 100% of children who are immunized with all recommended doses, at the recommended ages and intervals (see Routine Schedule). On the other hand, without immunization, your child is 100% without protection – or "unarmed" – against these diseases. Without immunization, your child is facing potentially deadly diseases, without protection.

unity

Risks Associated with not Vaccinating your Child

Children not vaccinated are more likely than anyone else to catch a contagious disease. Such risk is present even in countries where the vast majority of people are vaccinated. For example, data in the United States shows that children not vaccinated are:

- 22 to 35 times more likely to have measles than children vaccinated
- 6 times more likely to have whooping cough than children vaccinated

Also, children who are not vaccinated can spread contagious diseases to others.

Tetanus kills 10% or more of its victims.

Most sources present VPDs risks

Results

All communication materials were addressing parental concerns

FACT # 1
VACCINES DO NOT CAUSE AUTISM

Medical researchers and scientists around the worl
have not found a link between vaccines and autism
The study that had initially reported a link betweer
the measles-mumps-rubella (MMR) vaccine and
autism was retracted in 2011.

Myth: Nosodes are safer and a good alternative to vaccines.

FACT: Nosodes are not a good substitute for vaccines and there is no scientific or medical evidence to show they prevent infectious diseases. Nosodes are made using bacteria, viruses, tissue or other material from someone with a particular infection or disease. The substance is then diluted so much that little or no active ingredients are left in the final product. Although they are often called "homeopathic vaccines," they are not the same as getting immunized.

Why can't I let my baby's immune system develop its own immunity, rather than having all these viruses and bacteria injected into him?

Your child cannot develop immunity to something he has never been exposed to. While your child can develop immunity if exposed to a certain disease, before developing the immunity they will likely actually get sick from the infection and have to endure the possible life-threatening complications that may occur.

Examine the evidence: Vaccines do not cause autism.

- Safety of Vaccines Used for Routine Immunization of US Children: A Systematic Review (Pediatrics, 2014)
- 2012 Institute of Medicine report: Adverse Effects of Vaccines: Evidence and Causality
- MMR Vaccine does not cause Autism. Examine the evidence! (A list of articles that refute a connection between vaccines and autism from the Immunization Action Coalition, 2008).

Cook, J., Lewandowsky, S. (2011), The Debunking Handbook. St. Lucia, Australia: University of Queensland. ISBN 978-0-646-56812-6

2 of the 13 websites were aligned with ***most*** risk communication best practices

Results

BRITISH COLUMBIA | ImmunizeBC

STRENGTHS

- Information easy to understand
- Vaccine benefice is always enforced
- Parental concerns are addressed by sections “common myths” or “Frequently ask questions” (FAQ).
- Parents are involved in the decision
- Side effects are not avoided
- Pictures were not fear mongering (i.e., not showing dangers of VPDs)
  - Most of the time, pictures represent people or baby smiling

WEAKNESSES

- Lack of visual supports
- No sources / references
- Numeric information (denominators not provided or not constant)
- Suboptimal approach to address parents’ concerns

We need to do better. It is possible.

Conclusion and remarks

- Existing communication materials could be improved to better align with best practices in risk communication
- Given the availability of confusing and conflicting vaccine narratives, it is crucial that authoritative communication materials aim to build trust and support informed choices about vaccination
- Phase II:
  - Longitudinal interviews with parents-to-be (1st interview) and parents of young babies (2nd interview) to explore sources of information and influences on vaccination
  - Qualitative assessment of perception around ''best communication tools'' identified in phase I

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THANK
YOU