Cochrane Effective Practice and Organisation of Care
NIPH Norwegian Institute of Public Health
Norad Norwegian Agency for Development Cooperation

Communicating with the public about vaccines: Implementation considerations

Background

In the context of COVID-19, governments need to start planning for the delivery of a possible new vaccine. In addition, governments need to make sure that uptake rates of other vaccines, including childhood and influenza vaccines, are not neglected. This is particularly important in low- and middle-income settings where health systems may have been further weakened by the COVID-19 pandemic. Communication about vaccines is one important element when addressing these issues.

Purpose and objective

The purpose of this brief is to support decision makers who are planning and implementing vaccine communication strategies. The objective of this brief is to present implementation considerations based on evidence from systematic reviews.

Key messages

When planning communication strategies, consider how to:

- identify people's concerns and misconceptions about the disease and the vaccine
- provide information that people regard as trustworthy
- ensure that it is easy to find information about how the vaccine was developed, its contents, effects and safety, and the background for the decision to recommend it
- provide information that is transparent; consistent; timely; understandable; and accessible, including among hard-to-reach groups
- provide practical information about where to get the vaccine and the vaccine procedure

These issues are described in more detail below. This information is based on studies that have explored the views and experiences of the general public, parents of young children, older adults and healthcare workers. Many of these studies took place in high-income countries or settings that may differ from your own. You should therefore regard these factors as prompts that can help you think about how best to design strategies that meet the needs and preferences of people in your own setting.

Factors to consider when communicating with the public about vaccines

A. Understanding your target groups

Vaccines can target different groups of people, including pregnant women and children, the elderly, caregivers, healthcare workers, teachers and others. To make sensible decisions about how to communicate effectively, you need to have an **understanding** of the target groups in your setting.

Who is this brief for?

Decision makers and operational staff working in or with low- and middle-income countries who are planning and implementing strategies to promote vaccination uptake.

Who commissioned this brief?

The brief was commissioned and funded by the Evaluation Department of the Norwegian Agency for Development Cooperation (Norad) and was prepared by the Norwegian Institute for Public Health.

Norad (the Norwegian Agency for Development Cooperation) is a participant to the COVID 19 Global Evaluation Coalition – a network of evaluation units of Evalnet member countries, United Nations organisations and other multilateral institutions. The overall purpose of the COVID-19 Global Evaluation Coalition is to foster collaboration to improve the speed and quality of evaluative analysis, and communication, in ways that provide useful, credible evidence to support a more effective response to the COVID-19 pandemic, and future crises.

This brief is based on the following systematic reviews:

Ames 2017[2]; Carlsen 2016[3]; Lorenc 2017[4]; Eilers 2014[5] (see "About the systematic reviews underlying this brief" below).

What is a systematic review?

A summary of studies addressing a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise the relevant research, and to collect and analyse data from the included studies.

Perspective

The authors of this brief are researchers at the Norwegian Institute of Public Health (NIPH) and at NIPH's Centre for Informed Health Choices. The perspective we have taken in this brief is that we support the individual's right to make his or her own healthcare decisions, including decisions about vaccination. We also believe that it is important for people to have easy access to evidence-based information about vaccination, including information about side effects, evidence gaps and uncertainties. However, we also have a public health perspective, and regard adherence to vaccines recommended by the WHO as an important public health measure.

Have you considered how to identify and understand:

- concerns and misconceptions people may have about the disease, how it is transmitted, it's prevalence and severity; and about the vaccine, its safety and side effects?
- other strategies people in your setting are likely to consider to prevent the disease?
- the information sources they are likely to trust?
- the information resources that are available to them, including their access to the internet and social media?
- their language, literacy and numeracy skills?
- their familiarity with medical terminology?

People's concerns are likely to evolve over time. You should also consider how to keep track of changes in concerns and misconceptions, including concerns that arise in response to media stories, myths or rumours about vaccines.

B. Deciding where the information should come from

Information should come from a trusted source. For some target groups, this may be national health authorities or organizations such as the World Health Organization. People may also see scientific sources as desirable, particularly if these sources are seen as impartial and independent of the government. Others may be sceptical to some or all of these information sources or may prefer sources within their communities. While it is helpful to have one official source of information, consider providing information through a variety of other sources.

Have you:

- considered whether members of your target group are likely to perceive the information sources you are using as **impartial, balanced**, **independent** and **transparent**?
- made it clear **where your information comes from**? For instance, have you included information about who carried out any underlying research and how this research was funded?
- considered **how to reach groups** that do not have regular contact with the health system, have difficulties accessing other mainstream sources of information or may not trust mainstream information sources?
- made sure that information presented through different channels is **consistent**?

C. Thinking about the content of the information

People often want more information about vaccines than they receive. However, people's information needs vary, and you need to think about how you can provide answers to a wide range of questions in a way that is accessible and does not overwhelm people (see also 'Presenting the information' below).

Providing information about the disease

Have you:

- provided information about how **widespread** the disease in question is?
- provided information about how **contagious** the disease is and how the disease is transmitted. This includes information about how different groups may get infected or infect others.
- provided information about how **serious** the disease is? This includes information about how serious it is for different risk groups; including people with pre-existing conditions, children, the elderly, and pregnant women. Have you explained that some people who may not suffer severe forms of the disease can still transmit it to others for whom it might be far more serious?
- considered that some people may **underestimate their own risk** of getting the disease and of suffering serious implications from the disease? For instance, elderly people and healthcare workers may not have a realistic assessment of their own risk. It may therefore be helpful to explain that people in low risk groups may still get severe forms of the disease.

Explaining the background for a vaccine recommendation and acknowledging uncertainty

When a government or agency decides to recommend a vaccine, this is after much deliberation. This is particularly true in a pandemic situation, where the vaccine may be new, and where there are still uncertainties about the vaccine's long-term safety and effectiveness. Even for established vaccines with long-term data, effectiveness is never 100% and there may be side-effects. The decision to recommend a vaccine is likely to have been based on several considerations. However, members of the public may suspect that the decision was mainly driven by financial interests, such as ties to the pharmaceutical industry or the government's desire to minimise absenteeism and get people back to work. People may also suspect healthcare workers of being motivated by receiving incentives to vaccinate people.

Have you:

- explained the **considerations that were made** when the vaccine recommendation was made?
- been as open and transparent as possible about the **uncertainties** surrounding the vaccine?

- explained the **reasons for changes**, where vaccine recommendations have changed over time?
- explained **why this vaccine was chosen**, where several vaccines exist to prevent the same disease?
- considered whether vaccine recommendations could **appear inconsistent** with other healthcare advice? For instance, if pregnant women are told to avoid one type of vaccine, but asked to take another, have you explained why this is the case?

Providing information about how the vaccine was developed and how it works

Have you:

- explained that the vaccine **prevents** rather than cures disease?
- explained that by getting vaccinated, you can **protect others**, not only yourself?
- provided information about how the vaccine was **developed** as well as information about the **contents** of the vaccine? And have you considered how to address common concerns about these issues? For instance, for vaccines developed in the context of a pandemic, people may be particularly concerned about the speed in which the vaccine was developed and how well it was tested. People might worry that they are being used as "guinea pigs" to test the vaccine.

Providing information about the vaccine's effectiveness and safety

When presenting information about the **vaccine's effectiveness**, have you provided information about:

- how effective the vaccine is compared to doing nothing; compared to other infection control procedures such as handwashing; and compared to other approaches that are common in your setting, including alternative medicine?

When presenting information about side **effects and safety** issues, have you provided information about:

- side effects that are common, side effects that are rare but that can occur, and side effects that have not been found but that people may be concerned about?
- whether the side effects are likely to be worse than the disease itself?
- whether the vaccine is safe for people with existing health conditions and whether the vaccine could weaken the effect of/interact with other medicines?
- whether the vaccine is safe for specific groups, including pregnant women and the foetus?

(For more guidance on how to present evidence about the effectiveness and side effects, see Box 1.)

Providing practical information about the vaccine

Your target groups are also going to need **practical information** about the vaccine and the procedure.

Have you considered providing information about:

- where the vaccine is **available** and how much it **costs**? Remember that some people, such as young people or migrants, may not be familiar with how health services work in your setting.
- how the vaccine is **administered** (for instance, by injection or orally)?
- whether the vaccine is likely to be **painful** and whether there are ways to lessen the pain during the procedure and afterwards?
- what to expect **after the appointment**, and whether there is a vaccine schedule?
- how to find information about the type of vaccine they received and when they received it, for instance through a **vaccination card** or online?

D. Presenting the information

Information is only useful to people if it is presented in a timely and accessible manner.

Have you:

- made sure that information is communicated to people **before the vaccine appointment**, in a context where people have time to consider the information and come to a decision?
- made sure that the information is communicated in a **clear and simple** manner, and is available in **relevant languages**, including minority group languages?
- presented the information in a variety of **formats**, including writing and orally, to cater to different preferences and capabilities?
- helped people find the information that is most important to them by preparing different **layers** of information, and giving them the opportunity to access more detail on demand? Note that people who are less certain about whether to vaccinate may want more information than others.
- considered how you can **tailor** the information to different target groups such as pregnant women and the elderly, and to people with different attitudes to vaccine?
- considered using **personal stories** to illustrate information about the disease and the vaccine? This could include using opinion leaders that target groups trust.

E. Communication between healthcare workers and the public

Healthcare workers are an important source of information about vaccines but need the resources to be able to provide this information. They may also share many of the same concerns and misconceptions about vaccines as other members of society.

Have you considered:

- whether healthcare workers in your setting have **access to the information** they need to give clear answers to people's questions?
- whether healthcare workers have **concerns or misconceptions** about vaccines that may prevent them from providing correct and balanced information to their patients?
- whether healthcare workers have the **skills and time** to tailor information to people's needs, to have open, respectful discussions with parents in a caring, sensitive and non-judgemental way, and provide a supportive environment for decision-making?
- whether people in your target groups perceive healthcare workers as being driven primarily by the **best interests of their patient** or as being driven by other motives, such as financial gain?
- whether different target groups, for instance different age groups, may respond differently to information from **different types of healthcare workers**? And have you considered whether the extent to which the healthcare worker is familiar to the patient could influence communication and how information is received?

F. Communicating with healthcare workers and other service providers about vaccinations

Healthcare workers and other service providers are often target groups for specific vaccines. In some settings, these vaccines are mandatory for these groups. But healthcare workers and other providers may experience a tension between a desire to vaccinate themselves to protect their patients and their own autonomy and free choice as individuals. Some may regard vaccines as being driven by an agenda of increasing productivity or promoting patient safety rather than by a concern for their own wellbeing.

Have you:

- considered producing information that is specifically **tailored to healthcare workers**, that **acknowledges this tension** and that addresses their particular concerns?
- considered whether it might be useful to **use opinion leaders**, such as managers, to set an example?
- considered how to present information at a **level that healthcare workers see as suitable** and that is not perceived as 'dumbed down'?
- remembered that where vaccination of healthcare workers has been made mandatory, healthcare workers still have the **right to information** about vaccine effectiveness, side effects and safety?

How this brief was prepared

We selected four systematic reviews that synthesised research about people's views and experiences of vaccines and vaccine services. We selected reviews that explored a range of target groups and vaccines:

- Parents and routine childhood vaccinations
- The general public and the swine flu vaccine
- Vaccines targeted at older adults
- Healthcare workers and the seasonal influenza vaccine

Time limitations prevented us from carrying out a systematic search for systematic reviews. Instead, we made a pragmatic decision to select reviews that we were already familiar with, focusing on reviews of qualitative research as this method is appropriate for assessing people's views and experiences.

To ensure that none of the selected reviews had important methodological limitations, we assessed each review using an adapted version of the AMSTAR 2 tool[1]. We assessed a review to have important methodological limitations if it had one or more major methodological limitations or if it had a large number of minor methodological limitations. A review was categorized as having a major limitation if it did not use a comprehensive literature search strategy, if it did not use a satisfactory technique for assessing the methodological limitations for individual studies included in the review, or if it did not account for methodological limitations in individual studies when interpreting the results of the review. All other concerns were described as minor limitations. As the authors of this brief were co-authors of two of the reviews, these reviews were assessed by a third person.

We concluded that none of the selected reviews were assessed as having important methodological limitations. We extracted findings from each of the reviews, examined each finding, identified factors that could influence the implementation of vaccine communication strategies, and developed prompts for future implementers, based on these findings. These prompts were phrased as questions to help implementers consider the implications of the review findings within their context. We sent these prompts to a selection of stakeholders from different settings, including planners, implementers such as heads of hospital departments, and researchers in the field, to gather their feedback about the relevance of these prompts and the manner in which they are phrased and presented. Their feedback was incorporated into the final version of this brief.

About the systematic reviews underlying this brief

Reference	**Review objective**	**Date of most recent search**	**What study designs, settings, participants and vaccines did the review look for?**	**What study designs, settings participants, and vaccines did the review find?**	**Review limitations**
Ames 2017[2]	To explore parents' and informal caregivers' views and experiences regarding communication about childhood vaccinations and the manner in which it is communicated	2016	Qualitative studies. Studies in French, English and the Scandinavian languages. No restriction on country. Studies of parents and informal caregivers.	38 qualitative studies. 9 studies took place in low- and middle-income countries and 29 took place in high income countries. Most of the studies explored mothers' perceptions of vaccine communication. Some of the studies also included the views of fathers, grandmothers and other caregivers. Most of the studies focused on vaccines that were part of the WHO Expanded Programme on Immunization.	Minor
Carlsen 2016[3]	To explore public attitudes to the H1N1 ('swine flu') vaccine	2013	Qualitative studies. Studies in Spanish, English and the Scandinavian languages. No restriction on country. Studies of vaccine recipients or potential recipients of the H1N1vaccine.	16 qualitative studies: 14 from high income countries and 2 from middle income countries. 10 studies studied high risk or priority groups, including healthcare providers, pregnant women and people with chronic respiratory conditions; four studies studied the general public; and 2 studies studied both priority groups and the general public. Two studies focused on individuals that had chosen not to get vaccinated, while the remaining studies included people who had made different decisions. Most of the data collection took place during the swine flu pandemic (2009-2010).	Minor

About the systematic reviews underlying this brief (continued)

Reference	Review objective	Date of most recent search	What study designs, settings, participants and vaccines did the review look for?	What study designs, settings participants, and vaccines did the review find?	Review limitations
Eilers 2014[5]	To explore factors related to vaccine uptake by elderly persons.	2012	Qualitative and quantitative studies. English language studies of adults aged 50 years and older from Western countries.	53 quantitative and 7 qualitative studies, all from high-income countries. The studies explored people of different age groups over 50. Forty-one considered influenza vaccination, while the other 18 examined vaccination for other infectious diseases (pneumococcal pneumonia, herpes zoster, and pertussis [whooping cough]).	Minor
Lorenc 2017[4]	To explore healthcare workers' perceptions and experiences of vaccination for seasonal influenza.	2016	Qualitative studies. English language studies of healthcare workers. No restriction on country.	25 qualitative studies, all from high-income countries. The most commonly studied healthcare setting was hospitals or acute care facilities, followed by nursing homes or long-term care. 16 studies focused on healthcare workers' own views while the remaining studies explored the views of other stakeholders including infection control staff, managers and administrators.	Minor

Box 1 **Communicating research evidence about vaccine effectiveness and side effects**

The following resources provide detailed guidance regarding how to present results about vaccine effectiveness to patients and the public, health workers, policy makers and other stakeholders:

Glenton C, Rosenbaum S, Fønhus MS. Checklist and Guidance for disseminating findings from Cochrane intervention reviews. Cochrane, 2019. Available from: https://training.cochrane.org/online-learning/knowledge-translation/how-share-cochrane-evidence/dissemination-essentials-checklist

Oxman AD, Glenton C, Flottorp S, et al. Development of a checklist for people communicating evidence- based information about the effects of healthcare interventions: a mixed methods study. BMJ Open 2020;10:e036348. doi:10.1136/ bmjopen-2019-036348. Available from: https://bmjopen.bmj.com/content/bmjopen/10/7/e036348.full.pdf

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2. Ames HM, Glenton C, Lewin S: **Parents' and informal caregivers' views and experiences of communication about routine childhood vaccination: a synthesis of qualitative evidence**. *Cochrane Database Syst Rev* 2017, 2:Cd011787.
3. Carlsen B, Glenton C: **The swine flu vaccine, public attitudes, and researcher interpretations: a systematic review of qualitative research.** *BMC Health Serv Res* 2016, 16:203.
4. Lorenc T, Marshall D, Wright K, Sutcliffe K, Sowden A: **Seasonal influenza vaccination of healthcare workers: systematic review of qualitative evidence**. *BMC Health Serv Res* 2017, 17:732.
5. Eilers R, Krabbe PF, de Melker HE: **Factors affecting the uptake of vaccination by the elderly in Western society**. *Prev Med* 2014, 69:224-234.

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Disclaimer

The opinions expressed and arguments employed herein are solely those of the authors and do not necessarily reflect the official views of the OECD, its member countries, the Norad Evaluation Department, or other participants in the COVID-19 Global Evaluation Coalition.

Limitations of the brief

This brief aims to support decision makers in low and middle-income countries. Several of the studies included in the reviews that we have used to inform this brief were, however, from high-income countries. We encourage readers to assess the extent to which each of the considerations mentioned are applicable to their own setting.

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