

# Combating false information on vaccines

A guide for **health workers**



**PAHO**





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**PAHO**



Pan American  
Health  
Organization



World Health  
Organization  
Americas Region

*Combating false information on vaccines: A guide for health workers*

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# Introduction

Did you know that as a health worker, you are one of the most trusted sources people have for their questions about vaccination? You also can have a positive impact on vaccination behavior, even among patients who are questioning vaccines. With the growing threat of vaccine misinformation spreading both online and offline, your role in strongly advocating for vaccines and responding to questions and concerns is more important than ever. Trust is the backbone of the Expanded Program on Immunization (EPI), and your relationship with the community is key to that trust – especially as science deniers seek to keep people from getting vaccinated.



## Did you know?

**People who have been exposed to misinformation about vaccines are less likely to want to get vaccinated – even if they have had their shots in the past.**

This guide is designed to help you fight back against vaccine misinformation. It includes information on how and why misinformation spreads; how to combat it; and how to talk to people who are having doubts about vaccination, whether they are patients, community members, or fellow health workers.

As you are reading, keep in mind that making sense of human behavior is complex and includes many different factors. Correcting misinformation is not a silver bullet for getting people vaccinated, but it will help.



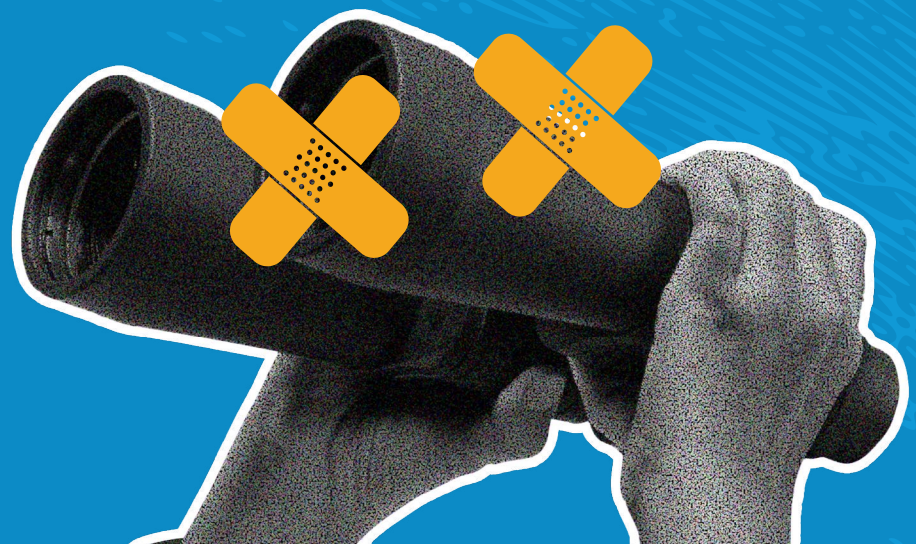
## Did you know?

**The sheer amount of information that people are exposed to each day means that, inevitably, misinformation is going to be shared, even by people who would not intentionally spread rumors.**

# Part 1: What is misinformation? Identifying it and understanding its pull

This guide refers to all false information, whether it is spread maliciously or not, as misinformation.

Misinformation spreads faster and farther than the truth – it is specifically designed to go viral by being persuasive and emotional, offering simplistic explanations for complex situations, filling information gaps (especially during crises, as was seen during the COVID-19 pandemic), fitting people’s worldviews, and making them feel like they belong to a community. Misinformation tends to be more successful when there appears to be a kernel of truth to it.





# Where does vaccine misinformation come from?

Misinformation is big business – especially for the handful of “superspreading” individuals who are responsible for originating the majority of vaccine misinformation online. Several of these science deniers earn six-figure US dollar salaries annually through selling supplements, food, and “secret cures,” as well as books and videos about proclaimed public health hoaxes and conspiracy theories; speaking fees; donations; membership fees to access their content; classes on topics like vaccine-free parenting and activism; “wellness retreats”; and affiliate marketing, where they pay each other to promote their products.

Social media platforms benefit from these individuals, as their vaccine misinformation content drives traffic and engagement on the social media platforms. Likewise, social media platforms are also key sources for science deniers to grow their customer bases; the algorithms tend to create echo chambers, which can isolate users from legitimate sources of information on vaccines.

Technology has also made it increasingly easy for almost anyone to create and share digital content with vaccine misinformation. Online platforms enable people to share information quickly and without much thought – information that is not usually challenged by friends, family, and community members.



## Did you know?

**Science deniers know how to work social media algorithms to their advantage, creating content that preys on the questions vaccine-hesitant people have and subverting scientists and experts who support vaccination with scientific facts.**



# Why does misinformation spread so widely?

In general, people seek out information that confirms what they already believe – human beings love to feel vindicated and love to be right!

The public way in which information is consumed on social media – for example, users can see if any of their friends have engaged with a piece of content – can also serve as a de facto endorsement of that content without people having to say a word. People's desire to belong to a group or a "tribe" can motivate them to share content that would show they belong. Within these social media echo chambers, people can confirm their identities and share their worldviews without much fear of major disagreement.

## Common tactics used in vaccine misinformation

Misinformation erodes trust in science, which in turn makes people more susceptible to falling for it. However, understanding the tactics used by science deniers to spread misinformation can make it easier for people to spot misinformation and not spread it further.

### Tactic

**Evoking strong emotions, especially fear, anger, disgust, superiority, or sadness**

### Example

**"INNOCENT BABY TRAGICALLY DIES MONTHS AFTER GETTING VACCINATED"**

**"BIG PHARMA CEOS INVENTED THIS VIRUS JUST TO SELL MORE VACCINES!"**

**Pushing conspiracy theories to explain things, tap into deep-seated fears, or vilify groups**

**Impersonating experts**

**CREATING FAKE SOCIAL MEDIA ACCOUNTS USING PICTURES AND SIMILAR NAMES OF WELL-KNOWN GOVERNMENT OFFICIALS, SCIENTISTS, OR MEDICAL AUTHORITIES**



**"DR. F.N. FACTS SAYS HER STUDY FOUND CHILDHOOD VACCINES LOWERED IQ BY 10 POINTS."**

**Inventing "experts" and studies to add credibility**

**"UNLESS THE VACCINE IS 100% EFFECTIVE IN PREVENTING ILLNESS AND HAS ABSOLUTELY NO RISKS, IT SHOULDN'T BE USED."**

**Setting impossible standards for vaccines**

**"WE SHOULD JUST TRUST NATURE TO DO ITS THING. NATURAL IMMUNITY IS SO MUCH BETTER THAN IMMUNITY FROM VACCINES."**

**Appealing to nature**

**Trolling (expressing extreme opinions to egg on other users, attack naysayers) / Polarizing or politicizing vaccination to create division**

**"ANYONE TELLING YOU TO GET YOUR CHILD VACCINATED IS TRYING TO CONTROL YOU! DON'T FALL FOR IT! DON'T BE A SHEEP!"**

**Selectivity in sources, not disclosing that the majority of experts disagree**

**"THIS DOCTOR SAYS THE VACCINE'S OF MYOCARDITIS IS TOO GREAT FOR CHILDREN TO GET THAT SHOT, WHICH PROVES THAT VACCINATION IS UNSAFE."**

**Discrediting experts who support vaccination**

**"WHY SHOULD WE LISTEN TO HIM ANYWAY? HE GETS PAID BY PHARMACEUTICAL COMPANIES TO PUSH VACCINES!"**

Using false logic

"MY NEIGHBOR GOT THE FLU SHOT AND STILL GOT SICK. THE FLU VACCINE IS WORTHLESS."



"DID YOU HEAR THE STORY ABOUT MY SISTER'S NEIGHBOR? HER SON GOT VACCINATED AND WAS DIAGNOSED WITH AUTISM LATER THAT MONTH."

Relying on anecdotes instead of data to make a point

Distorting factually correct information (Note: These will generally not be flagged as misinformation on social media platforms, as they are technically true)



"A 'HEALTHY' DOCTOR DIED TWO WEEKS AFTER GETTING A COVID-19 VACCINE; CDC IS INVESTIGATING WHY."

# Tips to spot misinformation online

Because it is impossible to remove every false piece of information from the Internet, the best defense is to teach people to understand and spot it. Be on the lookout for the following:



## Check

---

**The URL**



## Be wary of

---

Endings with .lo, .co (in English-speaking countries), .offer, .infontet



## Look for

---

Endings with .com, .org, or government URLs specific to your country

Snopes.com has a list of known fake news websites; check this to see if the website you are looking at is on it

---

**"About Us" and "Staff"**

---

Blank or missing text about the mission, location, staff, etc. of the outlet

---

Well-known and respected news outlets

---

Sites that claim to be alternate news, conspiracy theory sites, hoaxes, satire

---

**The date**

---

Articles that were published in the past that have been resurrected

---

Recent articles



## Check

---

### The byline



## Be wary of

---

Outrageous author bios (i.e., claims of many prestigious awards for a journalist who does not appear on an Internet search)

The same photo used for multiple authors



## Look for

---

Legitimate journalists who exist in real life

---

### Grammar

Spelling and grammar errors

The use of many exclamation points or question marks in a row!!!???

Text in ALL CAPS

Content that has been copyedited for spelling and grammar mistakes

---

### Content (read beyond the headline!)

Nonsensical or absurd text, like attributing quotes to animals

Made-up experts, organizations, and quotes (search names online to determine if they are real)

Invented data and figures

Content that makes sense

Real-life experts

Data that match what official sources (such as government or United Nations agencies) have published

---

### Links within the article

Broken links

Links that go to other suspicious websites

Links that go to legitimate, trusted sites



## Check

---

### Images

### Other content on the site

---

### Interactions

---

### Your biases

---



## Be wary of

---

Images that look edited:  
blurry, jagged edges,  
warped

Images taken from other  
websites

AI-generated images  
(often look slightly off; for  
example, people have too  
many fingers)

---

Other stories that look  
suspicious or nonsensical

---

Many comments that seem  
to be from trolls or bots

---

Content that confirms  
your suspicions or beliefs

Content that evokes  
strong emotions  
(especially fear, anger,  
sadness)

---



## Look for

---

Use Google Reverse Image  
Search to see where the  
image originated from

---

Legitimate stories that  
have been covered by  
trusted news outlets

---

Engagement from real  
people (Note: Sometimes  
real articles will still get  
attacked by bots or trolls)

---

Stories that expand your  
knowledge or worldview  
on a topic

---



Be aware that some people who spread misinformation will put false “fact-checked!” labels or badges on their content. Be wary and research who has claimed to have done the fact-checking.



### Did you know?

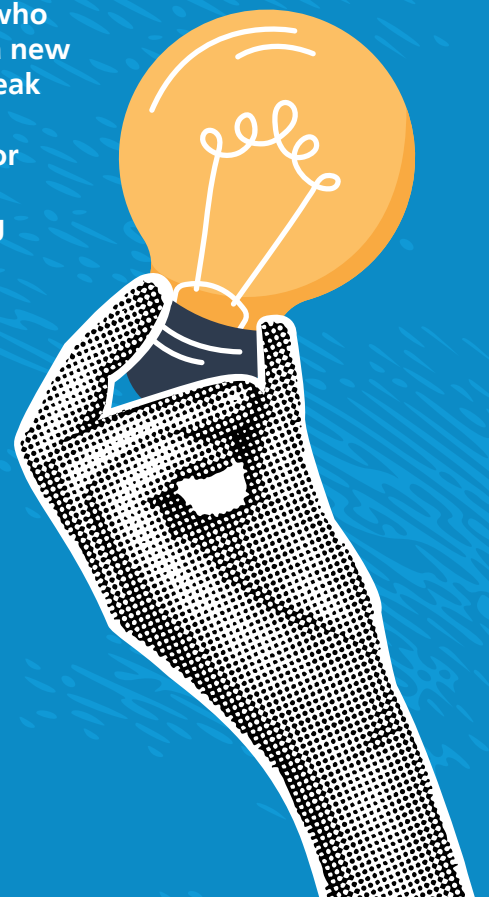
There are fact-checking organizations that you can turn to if you suspect you have encountered a piece of misinformation and would like to confirm if it is true or false; there is a good chance it has already been reported and responded to. Check [www.snopes.com](http://www.snopes.com), [BBC Verify](http://BBCVerify.com), [PolitiFact](http://PolitiFact.com), or [FactCheck.org](http://FactCheck.org). You can also email FactCheck if you encounter new misinformation that has not been debunked.

## Part 2:

# Strategies to fight back against vaccine misinformation in the clinical setting and community

As the face of the EPI and a vaccine hero, you and your fellow health workers have a critical role to play in fighting vaccine misinformation: not only are you able to counsel patients and community members on the scientific evidence in favor of vaccines' safety and effectiveness, you are also uniquely positioned to hear about new vaccine-related rumors as they sprout up. If you start hearing the people who are coming in for health services talking about a new vaccine myth that you had not heard before, speak to your EPI manager and see how you can share that information with the risk communications or social listening team in your country's Ministry of Health. They will want to know what is being said so they can respond.

You can also share the information on how to spot vaccine misinformation (see Part 1) with your patients and friends to keep it from spreading in your community.



# General rules for correcting misinformation in any setting

To maintain trust and be more effective at correcting misinformation, follow these tips:

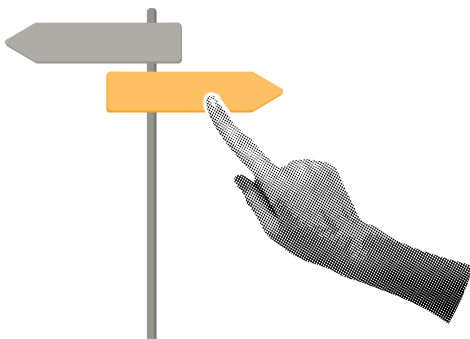


## **Be kind and nonjudgmental.**

Do not mock or make people feel bad for asking about misinformation, no matter how absurd it sounds to you; they should feel comfortable coming to you with their questions. Correcting misinformation is most effective when it is done by a trusted source, and you want you and your team to continue to be that source.



**Listen closely to understand what is at the root of what the person is asking.** What do they need? Assurance that they are doing the right thing? Medical advice? What can you offer them?



**Remember, correcting misinformation alone does not guarantee that someone will get vaccinated.** Some conversations may have to be repeated. Behavior is complex and dependent on many factors.

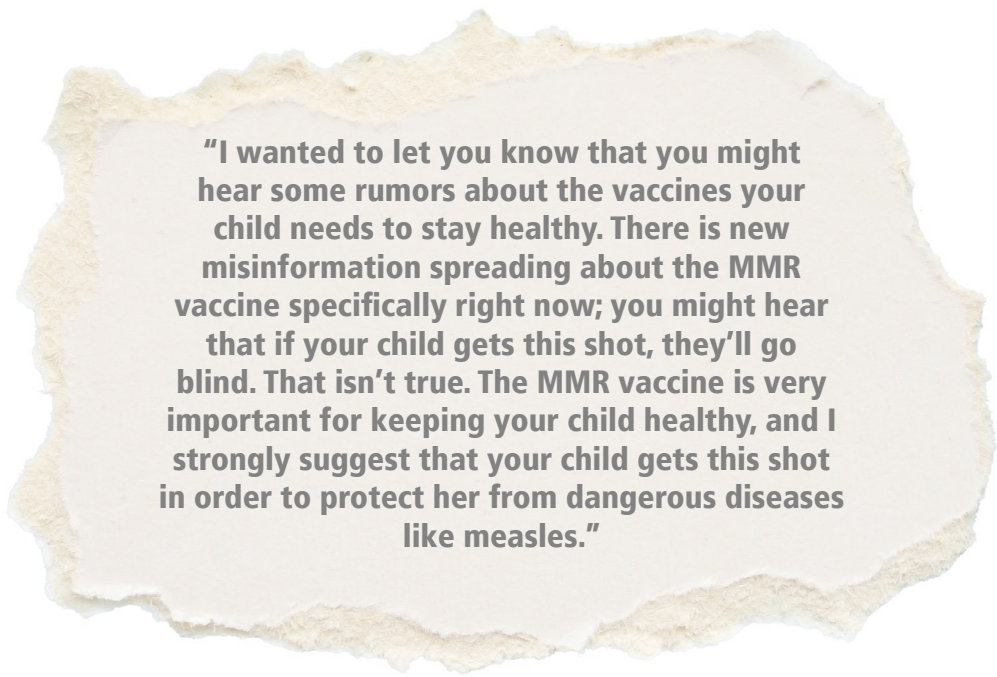
# Approaches to fighting misinformation

Two tactics you can use to fight misinformation are prebunking, which happens before an individual is exposed to misinformation, and debunking, which seeks to correct misinformation that somebody has already consumed. Neither approach is perfect, and researchers are still studying how to make interventions more effective given specific populations and situations.

## Prebunking

Prebunking “inoculates” you against misinformation the way a vaccine inoculates you against pathogens.

A critical part of prebunking is warning individuals that they might encounter misinformation about vaccines; if you are aware of a specific new rumor going around, you can give them a “weakened” version of the misinformation. After you warn them of the misinformation, provide them with the truth that you want them to remember. This might sound like:



**“I wanted to let you know that you might hear some rumors about the vaccines your child needs to stay healthy. There is new misinformation spreading about the MMR vaccine specifically right now; you might hear that if your child gets this shot, they’ll go blind. That isn’t true. The MMR vaccine is very important for keeping your child healthy, and I strongly suggest that your child gets this shot in order to protect her from dangerous diseases like measles.”**

Prebunking can be “therapeutic” in that it can still work for people who have been exposed to misinformation but do not fully believe it yet. And like some vaccines, its effectiveness can lessen with time – “boosters” may be needed. Be ready to remind patients about misinformation multiple times to ensure their defenses stay ready.



### Did you know?

Online games like [Go Viral!](#), [Bad News](#), [Harmony Square](#), and [Cranky Uncle](#) are a fun, interactive way to learn about misinformation and strengthen prebunking efforts.

## Debunking

Debunking seeks to correct misinformation in an individual’s mind and replace it with the truth – a tricky task, given how “sticky” misinformation is.

When debunking, lead with simple facts and make it clear that the misinformation you are referring to is false. Follow the myth with further information as to why it is not true, then end by repeating the fact. This might sound like:

**“Vaccines are safe for people to receive in the long and short term. There is a common rumor that the MMR vaccine causes autism, but there is no link between any vaccine and autism. A single study, which was poorly designed and already discredited, reported such an association in 1998. Since then, hundreds of well-designed studies have confirmed that this vaccine is safe and effective.”**

At one point in time, it was thought that debunking could do more harm than good because it exposes people to the very misinformation you want them to avoid. However, recent research has shown that this is not a serious concern and that it is better to consistently debunk.



**Did you know?**

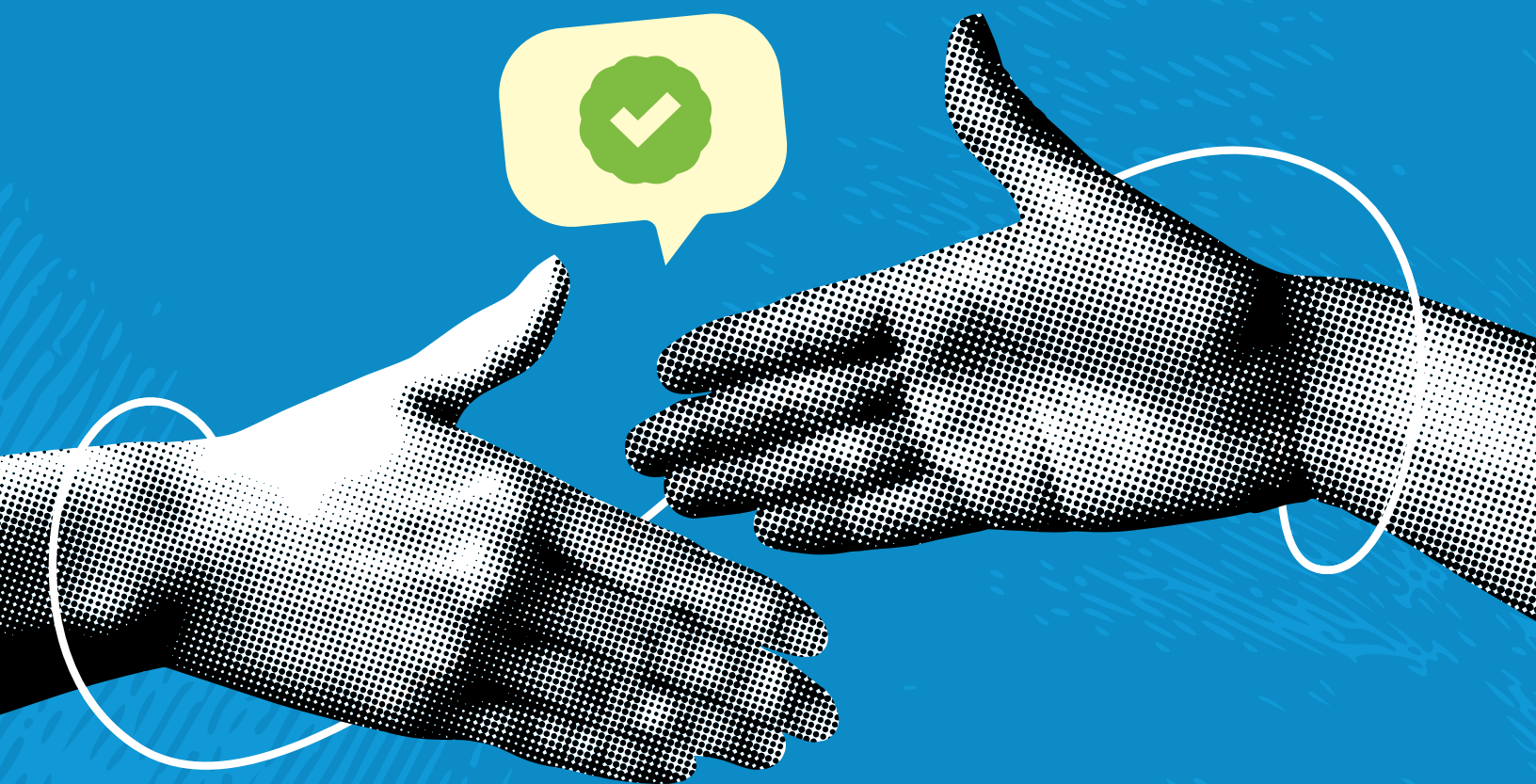
**You can help stop the spread of misinformation by reporting it on social media platforms and never sharing content unless you are positive it is true. Teach others to do the same!**

## Part 3:

# Supporting peers and patients to trust immunization

Health workers are exposed to misinformation just as the general public is, and they may see things that make them second-guess what they have learned in their training about the importance of vaccination. If you see that one of your colleagues is starting to doubt the safety or effectiveness of one of the vaccines your country offers, it is important to speak to them or to your EPI manager in order to get them the support and information they need before their doubts influence others around them.

Similarly, you are likely to encounter patients and community members with questions about vaccine misinformation more and more until social media platforms take more aggressive action to stop it. You can both teach them about how to spot misinformation and give them correct information when you speak.



## General tips

Regardless of who you are talking to, follow these tips for a more successful conversation:



Make them feel comfortable. Be kind, nonjudgmental, and open to what questions or doubts are being expressed. Be humble and avoid preaching. Do not make them feel like you are attacking them or their values – studies have found that people who feel judged are less likely to accept vaccination.



Demonstrate active listening, repeating back what they have said to make sure you understand and that they feel heard (“I understand that you’re having doubts about getting the COVID vaccine because you’re concerned there might be unknown long-term effects, is that correct?”).



Be transparent about risks and uncertainties, as doing otherwise will break trust and push people to believe more in the misinformation.



Do not label someone who has previously been vaccinated or supported vaccination as anti-vaccine just because they are expressing some skepticism based on misinformation they have been exposed to.



Find common ground and values: everyone wants to do what is best to keep themselves, their family, and their communities safe and healthy.



Always leave the door open for future conversations.

## Health workers

When discussing vaccination with fellow health workers, keep in mind the following:



Emphasize the overwhelming scientific consensus in favor of vaccines’ safety and effectiveness. Scientists, medical professionals, and other experts strongly agree that vaccines are safe and effective at saving lives.



Remember that some health workers’ risk perceptions for diseases may be lower if they do not feel the need to get vaccinated because they have been exposed to diseases like COVID-19 and influenza and have been OK. However, being lucky in the past does not mean that that luck will continue for future infections.



Show that you trust the science: talk about why you yourself and/or your loved ones have been vaccinated. Personal stories can help people see beyond data that might not mean much to them.



# Patients and community members

Remember that vaccine-hesitant patients or caregivers might be more susceptible to vaccine misinformation because people tend to seek out information that reflects what they already believe. With that in mind, try to follow these tips in your conversations with individuals who express doubt about vaccination:



Start and end with strong, confident, unambiguous recommendations for vaccination. This is known as the presumptive approach; it might sound like, “Your child is due for three shots today.” Make eye contact.



If a patient expresses doubt following the recommendation, use motivational interviewing (MI). Here, you can:



Ask open-ended questions to help you understand what your patient is thinking. For example, “What have you heard about this vaccine?”



Reflect on what the patient has said. For example, “It sounds like you’re worried that these vaccines will overwhelm your daughter’s immune system, based on what you’ve seen online.”



Affirm your patient so they feel seen and heard by you. For example, “I see you really care about this and want to do what’s best for your child.”



Offer to share more information. For example, “Can I tell you why I would give my son these shots today?”



Support the patient’s autonomy. For example, “At the end of the day, the decision is in your hands.”



Repeat your recommendation to proceed with vaccination. For example, “My recommendation is to give these shots today. Should we go ahead and do that?”



Be transparent about risks – both the minor and rare ones that can come from vaccination, as well as the very serious ones from not being vaccinated. Help them understand that the risks of being unvaccinated and facing severe disease or death are far greater than any risks associated with vaccines. Remind them that there are risks with things people do every day, from riding in a car to taking medication. Help them readjust risk perceptions that might have been skewed by misinformation.



Offer to connect them with other individuals who had once questioned vaccines but then decided to get vaccinated. Hearing personal stories from similar people can be extremely impactful.



Do not overwhelm them with information. Avoid technical jargon. Demystify language used to cause fear in misinformation.



Personalize the conversation to meet the needs and respond to the questions specifically asked by each individual.



If you are in a discussion with someone who is strongly refusing vaccination, do not spend much time and energy arguing with them; it is unlikely to make a difference. Do make your stance in favor of vaccination abundantly clear, as they might take silence as a sign you agree with them.



Remember that some conversations may need to be repeated – start talking about the benefits of vaccination early on in your relationship and continue to emphasize it as your relationship continues (this is especially important for health workers providing pediatric and maternal care).



**Remember!**

**People who do not get solid answers from health workers about vaccination will seek out other sources for it, putting them at risk of exposure to misinformation.**

# Conclusion

Health workers – the face of the EPI and the vaccine heroes working on the ground every day to protect their communities from dangerous vaccine-preventable diseases – can also be heroes in the fight against misinformation, which threatens vaccine uptake around the Americas. Health workers can learn about misinformation, how to identify it, and how to stop its spread, then share this information with their peers, patients, and community members. Health workers can also support individuals who express doubt about vaccines by kindly and transparently providing them with correct information and strong recommendations in favor of vaccination.

# Bibliography

Allen J, Watts DJ, Rand DG. Quantifying the impact of misinformation and vaccine-skeptical content on Facebook. *Science*. 2024;384(6699):eadk3451. Available from: <https://doi.org/10.1126/science.adk3451>.

American Psychological Association. 8 recommendations for countering misinformation. Washington, D.C.: APA; 2024 [cited 13 February 2025]. Available from: <https://www.apa.org/topics/journalism-facts/misinformation-recommendations>.

Annenberg Public Policy Center, University of Pennsylvania. Greater Acceptance of RSV Vaccine Seen as Vaccine Hesitancy Appears to have Plateaued. Philadelphia: Annenberg Public Policy Center; 2024 [cited 28 January 2025]. Available from: <https://www.annenbergpublicpolicycenter.org/public-shows-greater-acceptance-of-rsv-vaccine-as-vaccine-hesitancy-appears-to-have-plateaued/>.

Blane JT, Bellutta D, Carley KM. Social-Cyber Maneuvers During the COVID-19 Vaccine Initial Rollout: Content Analysis of Tweets. *J Med Internet Res*. 2022;24(3):e34040. Available from: <https://doi.org/10.2196/34040>.

Boryga A. A 'healthy' doctor died two weeks after getting a COVID-10 vaccine; CDC is investigating why. *The Chicago Tribune*. 8 April 2021. Available from: <https://www.chicagotribune.com/2021/04/08/a-healthy-doctor-died-two-weeks-after-getting-a-covid-19-vaccine-cdc-is-investigating-why/>.

Calo WA, Gilkey MB, Shah PD, Dyer AM, Margolis MA, Dailey SA, et al. Misinformation and other elements in HPV vaccine tweets: an experimental comparison. *J Behav Med*. 2021;44(3):310–319. Available from: <https://doi.org/10.1007/s10865-021-00203-3>.

Catalan-Matamoros D, Elías C. Vaccine Hesitancy in the Age of Coronavirus and Fake News: Analysis of Journalistic Sources in the Spanish Quality Press. *Int J Environ Res Public Health*. 2020;17(21):8136. Available from: <https://doi.org/10.3390/ijerph17218136>.

Center for Countering Digital Hate. *The Disinformation Dirty Dozen: Why Platforms Must Act on Twelve Leading Online Anti-Vaxxers*. London: CCDH; 2021. Available from: [https://252f2edd-1c8b-49f5-9bb2-cb57bb47e4ba.filesusr.com/ugd/f4d9b9\\_b7cedc0553604720b7137f8663366ee5.pdf](https://252f2edd-1c8b-49f5-9bb2-cb57bb47e4ba.filesusr.com/ugd/f4d9b9_b7cedc0553604720b7137f8663366ee5.pdf).

Center for Countering Digital Hate. *Pandemic Profiteers: The Business of Anti-Vaxx*. London: CCDH; 2021. Available from: <https://counterhate.com/wp-content/uploads/2022/05/210601-Pandemic-Profiteers-Report.pdf>.

Champions for Vaccine Education, Equity and Progress. Shared Clinical Decision Making for Vaccines: Challenges and Implications for Vaccine Awareness, Administration and Uptake. [place unknown]: CVEEP; 2024. Available from: [https://cveep.org/wp-content/uploads/2024/06/CVEEP\\_SCDM.pdf](https://cveep.org/wp-content/uploads/2024/06/CVEEP_SCDM.pdf).

Clarke CE, Dixon GN, Holton A, McKeever BW. Including “Evidentiary Balance” in News Media Coverage of Vaccine Risk. *Health Commun.* 2015;30(5):461–472. Available from: <https://doi.org/10.1080/10410236.2013.867006>.

Crosby LE, Real FJ, Cunningham J, Mitchell M. Overcoming Vaccine Hesitancy Using Community-Based Efforts. *Pediatr Clin North Am.* 2023;70(2):359–370. Available from: <https://doi.org/10.1016/j.pcl.2022.11.012>.

Ecker UKH, Sharkey CXM, Swire-Thompson B. Correcting vaccine misinformation: A failure to replicate familiarity or fear-driven backfire effects. *PLoS ONE.* 2023;18(4):e0281140. Available from: <https://doi.org/10.1371/journal.Pone.0281140>.

Enders AM, Uscinski J, Klofstad C, Stoler J. On the relationship between conspiracy theory beliefs, misinformation, and vaccine hesitancy. *PLoS ONE.* 2022;17(10):e0276082. Available from: <https://doi.org/10.1371/journal.pone.0276082>.

Finney Rutten LJ, Zhu X, Leppin AL, Ridgeway JL, Swift MD, Griffin JM, et al. Evidence-Based Strategies for Clinical Organizations to Address COVID-19 Vaccine Hesitancy. *Mayo Clin Proc.* 2021;96(3):699–707. Available from: <https://doi.org/10.1016/j.mayocp.2020.12.024>.

Gilkey MB, McRee AL. Provider communication about HPV vaccination: A systematic review. *Hum Vaccin Immunother.* 2016;12(6):1454–1468. Available from: <https://doi.org/10.1080/21645515.2015.1129090>.

Gusmanson, Tilt, Cambridge Social Decision-Making Lab. Bad News. Groningen: Tilt; [date unknown] [cited 11 February 2025]. Available from: <https://www.getbadnews.com/en>.

He B, Ma Y, Ahamad M, Kumar S. Corrective or Backfire: Characterizing and Predicting User Response to Social Correction. In: *ACM Web Science Conference (WEBSCI '24)*, 21–24 May 2024, Stuttgart, Germany. New York: ACM; 2024. Available from: <https://doi.org/10.1145/3614419.3644004>.

Jetelina K. The science (and business) behind COVID-19 disinformation. And what to do about it. *Your Local Epidemiologist.* [San Francisco]: Substack; 2024 [cited 24 January 2025]. Available from: <https://yourlocalepidemiologist.substack.com/p/the-science-and-business-behind-covid>.

Kiely E, Robertson L. How to Spot Fake News. Philadelphia: Annenberg Public Policy Center; 2016 [cited 11 February 2025]. Available from: <https://www.factcheck.org/2016/11/how-to-spot-fake-news/>.

Krause NM, Beets B, Howell EL, Tosteson H, Scheufele DA. Collateral damage from debunking mRNA vaccine misinformation. *Vaccine*. 2023;41(4):922–929. Available from: <https://doi.org/10.1016/j.vaccine.2022.12.045>.

Larson HJ, Broniatowski DA. Why Debunking Misinformation Is Not Enough to Change People’s Minds About Vaccines. *Am J Public Health*. 2021;111(6):1058–1060. Available from: <https://doi.org/10.2105/AJPH.2021.306293>.

Lewandowsky S, Cook J, Ecker UKH, Albarracín D, Amazeen MA, Kendeou P, et al. *The Debunking Handbook 2020*. [place unknown]: Skeptical Science; 2020. Available from: <https://www.climatechangecommunication.org/wp-content/uploads/2023/09/DebunkingHandbook2020.pdf>.

Loomba S, de Figueiredo A, Piatek SJ, de Graaf K, Larson HJ. Measuring the impact of COVID-19 vaccine misinformation on vaccination intent in the UK and USA. *Nat Hum Behav*. 2021;5(3):337–348. Available from: <https://doi.org/10.1038/s41562-021-01056-1>.

MacDonald NE. Fake news and science denier attacks on vaccines. What can you do? *Can Commun Dis Rep*. 2020;46(11/12):432–435. Available from: <https://doi.org/10.14745/ccdr.v46i1112a11>.

Opel DJ. Clinician Communication to Address Vaccine Hesitancy. *Pediatr Clin North Am*. 2023;70(2):309–319. Available from: <https://doi.org/10.1016/j.pcl.2022.11.008>.

Pan American Health Organization. *Communicating about vaccination-related risks*. Washington, D.C.: PAHO; 2023. Available from: <https://iris.paho.org/handle/10665.2/57690>.

Panthagani K. Why is trust in vaccines declining? *Your Local Epidemiologist*. [San Francisco]: Substack; 2024 [cited 22 January 2025]. Available from: <https://yourlocalepidemiologist.substack.com/p/why-is-trust-in-vaccines-declining>.

Panthagani K. They’re idiots. Why don’t they trust us? *Your Local Epidemiologist*. [San Francisco]: Substack; 2024 [cited 22 January 2025]. Available from: <https://yourlocalepidemiologist.substack.com/p/theyre-idiots-why-dont-they-trust>.

Peterson CJ, Lee B, Nugent K. COVID-19 Vaccination Hesitancy among Healthcare Workers-A Review. *Vaccines (Basel)*. 2022;10(6):948. Available from: <https://doi.org/10.3390/vaccines10060948>.

Pierrri F, Perry BL, DeVerna MR, Yang KC, Flammini A, Menczer F, et al. Online misinformation is linked to early COVID-19 vaccination hesitancy and refusal. *Sci Rep*. 2022;12(1):5966. Available from: <https://doi.org/10.1038/s41598-022-10070-w>.

Pierz AJ, Rauh L, Masoud D, Cruz AK, Palmedo PC, Ratzan SC, et al. Supporting US healthcare providers for successful vaccine communication. *BMC Health Serv Res*. 2023;23(1):423. Available from: <https://doi.org/10.1186/s12913-023-09348-0>.

PolitiFact, The Poynter Institute. Meta ending third-party fact-checking partnership with US partners, including PolitiFact. Washington, D.C.: Poynter Institute; 2025 [cited 11 February 2025]. Available from: <https://www.politifact.com/article/2025/jan/07/meta-ending-third-party-fact-checking-partnership/>.

Presseau J, Desveaux L, Allen U, Arnason T, Buchan J, Corace K, et al. Behavioural science principles for supporting COVID-19 vaccine confidence and uptake among Ontario health care workers. *Sci Briefs Ont COVID-19 Sci Advis Table*. 2021;2:12. Available from: <https://doi.org/10.47326/ocsat.2021.02.12.1.0>.

Rosenfeld DL, Tomiyama AJ. Jab my arm, not my morality: Perceived moral reproach as a barrier to COVID-19 vaccine uptake. *Soc Sci Med*. 2022;294:114699. Available from: <https://doi.org/10.1016/j.socscimed.2022.114699>.

Schmid P, Schwarzer M, Betsch C. Weight-of-Evidence Strategies to Mitigate the Influence of Messages of Science Denialism in Public Discussions. *J Cogn*. 2020;3(1):36. Available from: <https://doi.org/10.5334/joc.125>.

Sedova K, McNeill C, Johnson A, Joshi A, Wulkan I. AI and the Future of Disinformation Campaigns. Washington, D.C.: Center for Security and Emerging Technology; 2021. Available from: <https://doi.org/10.51593/2021CA005>.

Shen SC, Dubey V. Addressing vaccine hesitancy: Clinical guidance for primary care physicians working with parents. *Can Fam Physician*. 2019;65(3):175–181. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC6515949/>.

Smith R, Chen K, Winner D, Friedhoff S, Wardle C. A Systematic Review Of COVID-19 Misinformation Interventions: Lessons Learned. *Health Aff (Millwood)*. 2023;42(12):1738–1746. Available from: <https://doi.org/10.1377/hlthaff.2023.00717>.

Traberg CS, Harjani T, Basol M, Biddlestone M, Maertens R, Roozenbeek J, et al. Prebunking Against Misinformation in the Modern Digital Age. In: Purnat TD, Nguyen T, Briand S, editors. *Managing Infodemics in the 21st Century: Addressing New Public Health Challenges in the Information Ecosystem*. Cham: Springer; 2023. Chapter 8. Available from: [https://doi.org/10.1007/978-3-031-27789-4\\_8](https://doi.org/10.1007/978-3-031-27789-4_8).

U.S. Centers for Disease Control and Prevention. How to Build Healthcare Personnel's Confidence in COVID-19 Vaccines. Atlanta: CDC; 2021. Available from: [https://stacks.cdc.gov/view/cdc/142706/cdc\\_142706\\_DS1.pdf](https://stacks.cdc.gov/view/cdc/142706/cdc_142706_DS1.pdf).

Vosoughi S, Roy D, Aral S. The Spread of True and False News Online. *Science*. 2018;359(6380):1146–1151. Available from: <https://doi.org/10.1126/science.aap9559>.

Whitehead HS, French CE, Caldwell DM, Letley L, Mounier-Jack S. A systematic review of communication interventions for countering vaccine misinformation. *Vaccine*. 2023;41(5):1018–1034. Available from: <https://doi.org/10.1016/j.vaccine.2022.12.059>.

Wood RM, Juanchich M, Ramirez M, Zhang S. Promoting COVID-19 vaccine confidence through public responses to misinformation: The joint influence of message source and message content. *Soc Sci Med.* 2023;324:115863. Available from: <https://doi.org/10.1016/j.socscimed.2023.115863>.

World Health Organization. How to report misinformation online. Geneva: WHO; [c2025] [cited 11 February 2025]. Available from: <https://www.who.int/campaigns/connecting-the-world-to-combat-coronavirus/how-to-report-misinformation-online>.

Zimmerman T, Shiroma K, Fleischmann KR, Xie B, Jia C, Verma N, et al. Misinformation and COVID-19 vaccine hesitancy. *Vaccine.* 2023;41(1):136–144. Available from: <https://doi.org/10.1016/j.vaccine.2022.11.014>.





*Combating false information on vaccines: A guide for health workers* is designed to help health workers address vaccine misinformation. It begins by defining misinformation and explaining why it spreads rapidly, often due to its emotional appeal and simplistic explanations. The guide identifies common sources of vaccine misinformation, including influential individuals who profit from spreading false information. It outlines strategies for combating misinformation, emphasizing the importance of health workers as trusted sources. It provides tips for identifying misinformation online, such as checking URLs, dates, and author credentials, and recognizing tactics like evoking strong emotions or pushing conspiracy theories. Two main approaches to fighting misinformation are discussed: prebunking and debunking. Prebunking involves warning individuals about potential misinformation before they encounter it, while debunking aims to correct false information after it has been consumed. The guide offers practical examples for both methods. Additionally, the guide highlights the role of health workers in supporting peers and patients to trust immunization. It suggests being kind, nonjudgmental, and transparent when addressing concerns, and using motivational interviewing techniques to understand and respond to patients' doubts. Overall, the guide emphasizes the critical role of health workers in maintaining trust in vaccines and provides comprehensive strategies to identify, address, and prevent the spread of vaccine misinformation in clinical and community settings. The guide is a valuable resource for health workers to enhance their ability to combat vaccine misinformation, support informed decision-making, and promote trust in vaccines within their communities. It addresses this pressing issue with practical solutions, supports trusted health workers, and ultimately aims to protect public health by promoting accurate information and trust in vaccines.

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