Practical playbook for addressing health misinformation

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Glossary of Terms

- **Amplification:** The process of spreading specific information, whether factual or not, and increasing its reach by sharing and discussing on communication platforms (eg, social media, local news, radio, etc.).

- **Data/Information Void:** A lack of reliable or accessible data or information on the health issue of concern.

- **Debunking:** The process of exposing, refuting, or correcting false or misleading information spreading in a community. This includes fact-based, logic-based, and source-based debunking.

- **Disinformation:** Deliberately false or misleading information usually spread via various communications channels with the intent to manipulate, deceive, or influence beliefs, opinions, or actions.

- **Escalating Public Health Issue:** A public health event with the potential for increasing misunderstanding or rumors.

- **High/Low Trust:** The levels of trust between individuals or communities and health authorities.

- **Infodemic:** The overabundance of information—both accurate and inaccurate—related to an escalating public health issue.

- **Inoculation:** The process of teaching people to identify and refute misleading or false information. Inoculation messages—which typically contain a warning that the user will see misinformation, information to help the user spot and refute the rumor, and an example of false or misleading information users can identify in the future—are meant to build cognitive resilience to mis/disinformation in the same way vaccines prompt the human body to create antibodies to fight against future infections.[1]

- **Large Language Models (LLMs):** A type of artificial intelligence that has been trained using huge amounts of data to understand and generate human-like language (eg, OpenAI's ChatGPT series, Meta's LLaMA, and Google's PaLM2).

- **Misinformation:** False or inaccurate information.

- **Health/Science/Media Literacy:** A person's ability to effectively access, analyze, interpret, evaluate, and use information to make informed decisions about their health, scientific facts, and media content.

- **Plain Language:** Written or spoken communication that uses clear and concise language to help the intended audience understand the first time they encounter it.

- **Prebunking:** The act of addressing or refuting potential false information before an individual is exposed. This involves educating people about common tactics of deception or manipulation, encouraging critical thinking, and engaging target audiences.

- **Public Health Emergency Preparedness and Response (PHEPR):** Engagement in public health activities that aim to prevent, protect against, quickly respond to, and recover from public health emergencies.[2]

- **Rumor:** A claim that is untrue, may be untrue, or is misleading.

- **Secondary Messenger:** People and institutions outside of public health departments and government agencies that play important roles in PHEPR, including disseminating health messaging, building trust in public health, and dispelling misinformation.

- **Social Listening:** The process of tracking information on communication platforms to identify false information or information gaps about an escalating public health issue.

- **Trusted Messenger:** Someone who is perceived as reliable, credible, and trustworthy to a target audience.

Glossary of Icons

This playbook uses icons to identify or indicate certain topics, described below:

🔨 The hammer indicates toolkits or resources that can help you complete action items. For a complete list of these resources, see [Appendix F](#).

💡 The lightbulb indicates helpful tips to consider when completing action items.

🔍 The magnifying glass gives you a closer look into specific topics related to the playbook.

💲 The dollar sign indicates tools with subscription fees.

⏩ The fast-forward symbol shows other actions you can take if you have the time and resources.

Playbook Overview

Misleading rumors, misinformation, and disinformation can make health events more complicated, reduce trust in public health efforts, and lead to negative health impacts. The *Practical playbook for addressing health misinformation* provides guidance on ways public health and medical professionals can set themselves up for success, make decisions on when they need to act to address misinformation, choose which actions and approaches might be useful to their audiences and information needs, and evaluate how their efforts are working. It also provides tools, templates, and examples to help in these efforts. Although there is no "silver bullet" to solve the problem of public health misinformation, this playbook helps to lay the groundwork for health communicators such as yourself to address the issue.

For a rapid review of content within the playbook, use the checklist below. The rest of the playbook outlines these tasks with more specific tips and tools for how to approach the following activities.

Set yourself up for success before rumors spread

☐ Identify 'prework' or things you can do before rumors come up. Think ahead—before a rumor spreads or an emergency occurs—about possible rumors, successful approaches from the past, ways to improve the public's resilience to false or misleading information and their knowledge of public health activities, and conduct the work outlined in the playbook.

☐ Put together a team you can call on when you need to address a rumor. Work to understand resources, responsibilities, procedures, skills, and available staff and experts you can turn to during a response. Leadership buy-in is important as well.

☐ Connect with communities and build partnerships. Engaging with community members and building partnerships enables communication through trusted messengers and networks. These relationships are best built over time.

☐ Get to know your audience. Make sure you understand who your audience is, the kind of communication they prefer, and how to be responsive to their needs.

☐ Set up a way to identify misinformation. To fill information gaps and respond to misinformation, figure out which questions you will need to answer and what misinformation is circulating. Establish social listening activities ahead of time through community partners and/or by using technology platforms.

☐ Answer your audiences' questions and concerns quickly. You may be able to prevent the need for a misinformation response by filling information gaps and answering questions quickly and effectively. Getting ahead of rumors in this way is often more effective than responding to rumors that start to circulate later.

Decide whether to address the rumor

☐ Identify your goal for responding to a rumor. Determine the intended outcome of messaging efforts, any larger goals and specific objectives you want to achieve, and what audiences want or need in the situation.

☐ Identify what influences your decision to respond. Build a common understanding of why you want or need to respond. Identify the factors you should consider when choosing your response to a rumor. Factors often revolve around the seriousness of the rumor, capacity to act, and potential consequences.

☐ <u>Decide whether you will address the rumor</u>. Not all rumors can or should be addressed. You and your team will need to consider all influencing factors together to decide if you should take action to address misinformation. Sometimes, not taking action is the best decision. During emergencies, these decision-making processes may change as priorities change.

Take action to address misinformation

☐ <u>Identify the kind of misinformation that is spreading</u>. Rumors often recycle common misinformation narratives. These patterns can help you organize your approaches to misinformation and consider approaches that may be successful for a narrative of concern. Consider levels of risk from misinformation, which can influence the extent of efforts that should be made to manage the rumors.

☐ <u>Characterize your priority audience and your communication goals for them</u>. Upon detecting rumors, identify the audiences you want to focus on. Often, these are groups of people who may be most impacted or would be most likely to believe a rumor. Goals for these populations often include raising awareness about relevant facts, building resilience, and/or providing factual alternative explanations.

☐ <u>Choose an action approach</u>. You can approach misinformation in different ways, and some require more resources than others. Often, these include amplifying accurate information, filling information voids, leveraging trusted messengers and engaging communities, fact-checking/debunking, prebunking/inoculations, and improving health literacy.

☐ <u>Select communications channels and trusted messengers</u>. The best communications channel(s) for a message that addresses misinformation is the platform(s) on which the rumor is spreading. Prioritize these channels by how accessible messages will be to target audiences. You can add other channels—like social media, in-person engagement opportunities, and traditional and digital media—to your priority list based on their popularity, user-friendliness, and/or trustworthiness.

☐ <u>Choose strategic ways to frame your messages</u>. You can guide audiences toward receiving messages in intended ways by framing them strategically. Match messages to the motivations of audiences, such as by framing information that audiences might not accept easily in a way that aligns with their moral values or by focusing on desirable outcomes or benefits they can receive.

☐ <u>Create and disseminate your messages using good practices</u>. Messages should be structured in ways that highlight empathy, connect with audiences' values, empower action, and address misleading claims. Use plain and accessible language, tone, and visuals that resonate with audiences when creating messages. You may need to adjust approaches to be effective across different audiences.

☐ <u>Even if you can't act, address misinformation in other ways</u>. Sometimes it may not be appropriate to respond to a rumor. Still, you can rely on strategic partners, amplify trusted voices, and continue to engage in community outreach activities. It is also important to keep reassessing the decision not to act in case the situation gets worse.

Evaluate anti-misinformation messages

☐ <u>Gather feedback about your messages</u>. Although understanding the effectiveness of messages and efforts to manage misinformation is difficult, these activities will help you know if messages are understandable, relevant, or effective and if they are reaching intended audiences.

What is this playbook for?

This practical playbook is designed to help public health and medical professionals and other health communicators—such as yourself—understand when to step in and what actions to take to address rumors and misinformation related to public health issues.

The playbook can help you (1) **prepare for** health-related rumors, (2) decide **when to act**, (3) determine which **actions to take** to address misinformation, (4) **develop messages** to address misinformation, and (5) **gather feedback** about your messages.

🔍 **The actions outlined in the playbook assume the following:**

- Your institutional leadership supports misinformation management activities.
- Staff members are available and have the time and resources to carry out the suggested actions.
- Your organization can identify misinformation that is circulating.

Note: This playbook's recommended actions may help manage the spread of misinformation and the problems it creates but are unlikely to completely alleviate the concern.

Health Information Management and Alert System

This playbook builds on the Centers for Disease Control and Prevention's (CDC) Health Information Management and Alert System (HIMAS) ([Figure 1](#)), which provides a framework to tackle circulating health misinformation.[*] HIMAS contains 4 phases:

1) **Pre-planning**, which includes thinking about risks ahead of time, pinpointing where you can get data, coming up with a strategy for flagging rumors, and identifying who does what;

2) **Monitoring, analysis, and insights**, which includes analyzing and sharing the kind of rumors that come up, revising messages to address these rumors, learning about your audience, and telling partners about what is going on and how you will respond to rumors;

3) **Actions**, which includes bringing together anyone who can help respond to rumors, making improvements to public health programs, testing messages, doing research, and reducing harm by addressing rumors across different communications channels; and finally,

4) **Evaluation and refinement**, which includes analyzing message needs, measurements, and inputs from your audience and partners; adjusting the communication cycle based on that information; and planning for next steps.

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* Betsy Mitchell, email communication, February 5, 2024

CDC's Action Plan:

Health Information Management and Alert System (HIMAS)

PHASE 1

Pre-Planning

- **Assess** risk in rollout topics/editorial calendars, historical experiences with topic
- **Use** data from ecosystem (social media, survey data, CDC-INFO, behavioral science)
- **Determine** monitoring and alerting strategy, advance message testing
- **Affirm** response roles/actions and engage partners and influencers

PHASE 2

Monitoring, Analysis, Insights

- **Analyze** and disseminate monitoring digests
- **Refine** monitoring strategy and revise messages (social media, talking points, etc.)
- **Conduct** audience research
- **Brief** internal partners and discuss response

PHASE 4

Evaluation and Refinement

- **Assess** narrative(s), metrics, refine monitoring
- **Assess** emerging message needs
- **Assess** audience and partner inputs and refine strategy
- **Convene** internal partners and determine next steps

PHASE 3

Actions

- **Convene** internal partners (social media, program, spokespeople)
- **Affirm** action steps and best practice by channel for current situation
- **Engage** partners in response
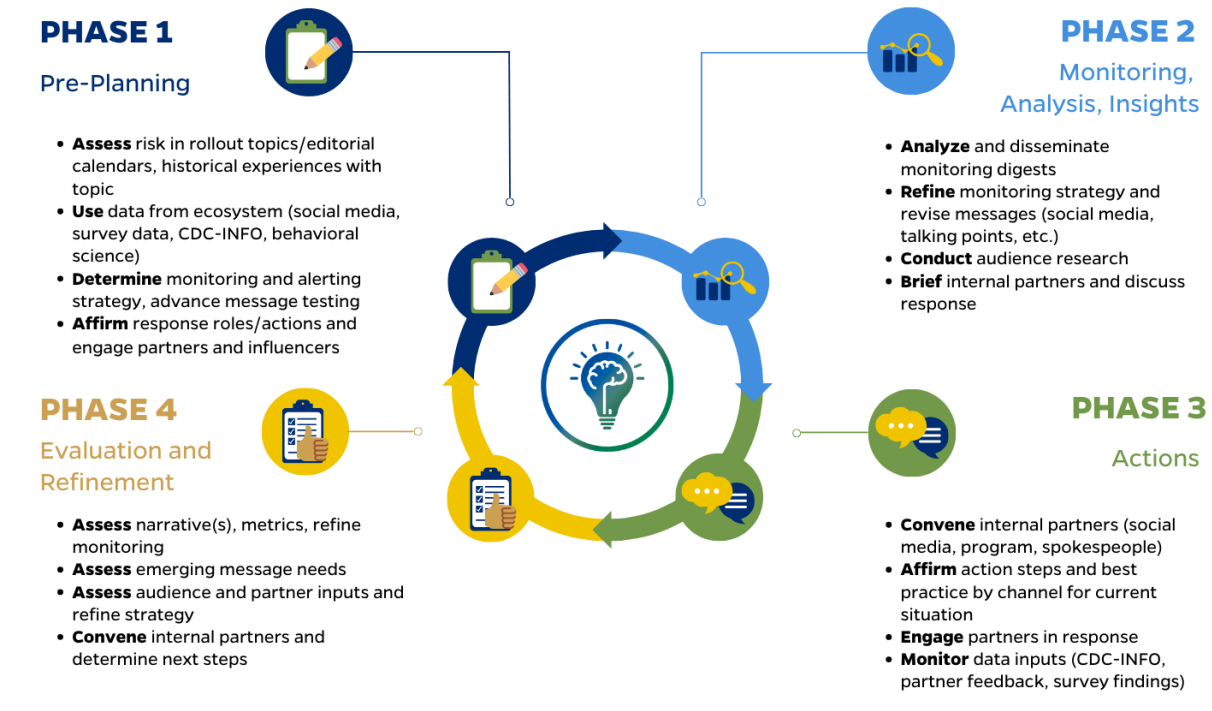- **Monitor** data inputs (CDC-INFO, partner feedback, survey findings)

Figure 1. CDC's Health Information Management and Alert System (HIMAS)

Set yourself up for success before rumors spread

It is important for you and your team to plan for misinformation before an escalating public health issue (ie, a public health event with the potential for misunderstandings and rumors to arise). These plans ensure that you and your team are ready to act when rumors spread or as a part of public health emergency preparedness and response (PHEPR) efforts.

Identify 'prework' or things you can do before rumors arise

Before a public health issue escalates enough to result in misinformation, you can do "prework" activities to prepare for rumors. For example, you can:

- Identify and anticipate the rumors that come up repeatedly in the community and identify ways to prebunk these rumors (ie, discuss false information in advance) or inoculate people against them (ie, inform people about how they might be misinformed). Craft messaging to address repeat rumors and update them to address possible future rumors.

- Keep track of which actions helped address rumors in the past and identify strategic actions for the future.

- Engage in activities aimed at improving the public's resilience to misinformation and build their trust in public health.[3]

  🔨 Appendix A: Checklist to Improve Trust

- Carry out programs that improve understanding of what public health does and the role it plays in society.

- Fill out the worksheet in Table 1 to pinpoint which factors influence decisions on when and how to address misinformation. For instructions on filling out this worksheet, see Step 1.2 Identify what influences your decision to respond.

💡 **Tip:** *Check out the* Glossary of Terms *to understand what terms like prebunking and inoculation mean.*

Put together a team for when you need to address a rumor

Looking out for and responding to misinformation can take a lot of time, dedication, and skill. Before rumors come up and as part of your PHEPR efforts, you should put together a multidisciplinary team of people (such as communication personnel, social media/digital technical staff, subject matter experts, partners, etc.) who can address misinformation in a quick and coordinated way that is supported by your organization's leadership. You and your team can:

- Identify and understand available resources, specifically whether you are working in a very limited environment, have some resources and flexibility, or have many dedicated resources.

  🔨 WHO/UNICEF: How to build an infodemic insights report in 6 steps: Annex A7

- Outline the roles, responsibilities, knowledge, skills, and abilities needed to prepare for and respond to rumors.

  🔨 [WHO competency framework: Building a response workforce to manage infodemics](#)

- Coordinate among people and teams to clarify roles and responsibilities, as well as who will make final decisions.[4]

- Put together a list of subject matter experts who can provide advice, such as scientists who are influenza experts and could provide input during an influenza epidemic.[5]

- Get institutional buy-in from all relevant levels of leadership to address misinformation and rumors when warranted.

Connect with communities and build partnerships

Connecting with communities and building partnerships before public health issues escalate is important groundwork. For example, you and your team can:

- Use community engagement approaches to connect with communities and involve the public in decision-making.

  🔨 [Appendix A: Checklist to Improve Trust](#)

- Set up a way to gather information and feedback from members of the public.

- Work closely with partners that already have strong communication platforms and have earned community trust.

- Build relationships with diverse secondary messengers and community partners, especially partners who can share messages that will be trusted within their own communities.

  🔨 [FrameWorks: Must-Have Messenger Mindset](#)

- Build a network of trusted messengers—people who understand their community's needs and can help reach audiences in effective ways.[6] For example, people who don't trust the government may be more likely to listen when a local community leader is addressing misinformation rather than an official state or federal health department spokesperson.[3,7]

- Strengthen relationships with existing networks of colleagues.

Get to know your audience

Make sure you understand who your audience is and adjust messages to meet the unique needs of different audiences. To accomplish this, you and your team may:

- Ask questions about who you are communicating with, what they do or don't know about public health issues, and what questions they may have about an escalating public health issue.

  🔨 [PHCC: Plain Language for Public Health: Defining Your Audience and Goals](#)

- Understand which channels your audience uses to communicate, learn, and receive information. You should share your messages on these channels to reach more people.

  🔨 [UNICEF: Vaccine Misinformation Management Field Guide: Information Ecosystem Assessment](#)

- Create an audience persona to understand different levels of trust in public health audiences and how messages need to be tailored.

  🔨 [Appendix B: Audience Persona Characterization Tool](#)

- Identify which audiences are likely to be impacted or change their beliefs/behaviors based on your approach.[†]

- Collect input from your target audiences to understand which communities are more or less vulnerable to different types of rumors.

  🔨 [WHO/UNICEF: Infodemic Insights Report: Defining risk assessment criteria](#)

- Learn about new and existing audiences by reviewing relevant research, examining work done with or about these groups, holding listening sessions, and talking about audience needs and beliefs with partners who represent them.

Set up a way to identify misinformation

Social listening is a form of information tracking used to identify false information or information gaps within a community.[8] It is a foundational tool of infodemic management[9] and allows health communicators to better address people's information needs by filling information gaps, answering relevant questions, and managing misleading information.[10] To engage in social listening, you can:

- Ask community partners what information they know is circulating.

- Monitor comment sections in relevant media platforms such as X/Twitter (easiest), Facebook, Instagram, TikTok, and WhatsApp (hardest), which have built-in analytics that are free, quick, and easy to gather for resource-limited settings.[11]

- Identify the sources and individuals spreading false information.

- Monitor trending hashtags associated with identified misinformation and disinformation.

- Use internal social listening tools such as monitoring of call center questions or noting questions asked at in-person events.[5]

- Use the following free, easy-to-use social listening tools to enhance the previous information tracking efforts on media platforms:

  🔨 [Google Alerts](#). Platforms covered: web content, including web pages, blogs, news sites, YouTube, etc. Search capabilities: keywords.

  🔨 [Talkwalker](#). Platforms covered: blogs, websites, forums, and social media.[11]

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† Nick Moran and Lindsay Smith Rogers, MA, private correspondence, October 2023

💡 **Tip:** *Take care to select the right search terms and avoid making your search too narrow by using too many keywords. Fewer search terms will yield more results. Remember to adapt your strategy as the public health issue escalates!*

Answer audience questions and concerns quickly

Communication needs range from questions and concerns about a public health issue to clear-cut misinformation and disinformation (Figure 2). One of the best ways to keep rumors from arising is to answer questions and concerns when you detect them, before these spaces are filled by misinformation.
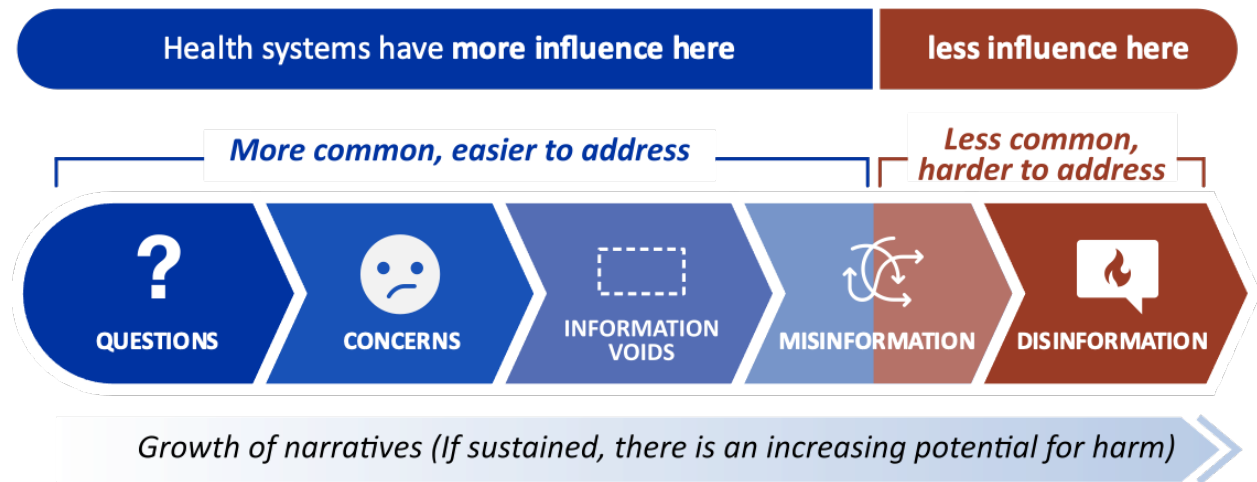
Figure 2. Spectrum of health narratives during escalating public health issues. Adapted from WHO Infodemic Management, Unit for High Impact Events Preparedness and Prevention

You can do the following to understand audiences' questions and concerns:

- Notice questions and concerns on social media platforms, through social listening efforts and by encouraging partners to pass along community members' concerns.

- Pay attention to questions and concerns during the beginning of an escalating public health issue or when a new intervention, guidance, or therapy is released, as this is often when information is evolving.

- Plan to fill knowledge gaps quickly, directly, and honestly. You can do this by answering questions as they come up through interactive sessions or by compiling them and answering them all together. Addressing concerns upfront is easier and more effective than trying to expose, correct, or refute misleading or false information later.

These steps can help prepare you to address health-related rumors and misinformation in real time. The next sections of this playbook provide information on how to manage emerging rumors.

▶▶ If you have more time and resources:

- Create standard operating procedures so that people who are responsible for responding to misinformation are ready to act and react in a quick and coordinated way.[12]

- Conduct studies, polls, or other activities to understand factors that influence how your target audience may receive and potentially react to health-related messages.[13,14] This information can help you adjust messages for different audiences.

- Use more advanced social listening tools.
    - 🔨 $ [Meltwater](#)
    - 🔨 $ [Sprout Social](#)
    - 🔨 $ [XPro (formerly TweetDeck)](#)
    - 🔨 $ [Awario](#)

- Implement long-term efforts to improve the public's resilience to information that may mislead them and reduce their trust in public health.
    - 🔨 [Appendix A: Checklist to Improve Trust](#)

- Improve health and science literacy to help people better understand and cope with the fact that scientific knowledge and guidance evolves all the time.[15]

- Make people aware of common tactics of deception or persuasion (eg, when people refer to fake experts, use emotional language, or misdirect blame on other people).[16,17]

⚠️ **You got an alert that a rumor is going around. What do you do next?** ⚠️
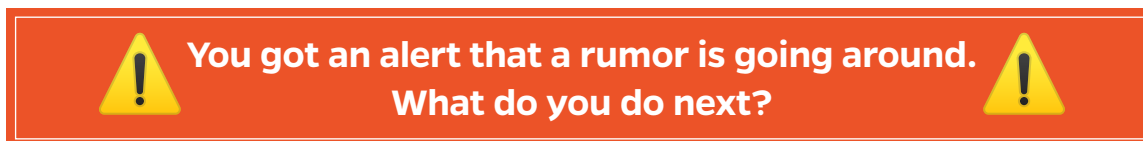
Step 1: Decide whether to address the rumor

Step 1.1 Identify your goal for responding to a rumor

Often, you may need to either (1) conduct further research on an issue, (2) make programmatic changes, or (3) communicate a message. This playbook provides guidance for responding to misinformation via communication efforts. Before you proceed with these communication efforts, identify your desired goal(s) of responding to a rumor. To do so, consider:

- The **intended outcome** of any message created to address a rumor (eg, to raise awareness of a rumor before it spreads widely, or prebunk)

- Any **larger goals and specific objectives** you hope to achieve (eg, improving people's trust in vaccines)

- Using specific, measurable, achievable, relevant, and time-bound (SMART) goals that are **clear, achievable, and meaningful**[18]

  🔨 MindTools: SMART Goals

- Linking these goals to **audience-specific communication goals** later in Step 2.2 Characterize your priority audience and your communication goals for them.

Step 1.2 Identify what influences your decision to respond

Many factors influence whether you do something about misinformation. You and your team can work together to balance how these factors affect your decision to respond. For example, you may care about:

- **The seriousness of a viral rumor:** how much a rumor is spreading, how many people a rumor is reaching on social media, whether the rumor is hurting people, who the rumor is hurting, or how believable or powerful the person or entity spreading misinformation seems.

- **Your capacity to act:** whether there is enough scientific evidence to prove that a rumor is false, whether your institution approves of you responding to the rumor, or whether there is enough funding to develop and share messages.

- **Reducing negative consequences:** whether unfavorable outcomes could result from addressing a rumor, such as accidentally amplifying misinformation, pushing away some audiences, making public health workers a target of harassment, or filling gaps in knowledge with incomplete or incorrect information.

To streamline this process, you can fill out the worksheet in Table 1 using the following instructions. You can download and edit the tool at this link:

1. Make a list of factors that influence your decision to address a rumor. Add them to the "Decision Criteria" column, as shown.

   Tip: Make sure these factors are relevant to your organization. You can also complete this step as prework, so this list is already filled in when a rumor surfaces.

2. Add plain language definitions of the factors that influence your decision to the "Criteria Definition" column.

   Tip: Make sure the decision-making team has a shared understanding of what these influencing factors mean. You can also complete this step as prework so that this column is already filled in when a rumor surfaces.

3. For each influencing factor, write down the benchmark you will use to decide whether it is time to act. Add this to the "Benchmark" column.

   Tip: You can use a mix of quantitative and subjective benchmarks. For example, to measure the spread of a rumor, you could use a benchmark like "rumors must make up 75% of health narratives collected by our social listening system" or "subject matter experts think that this rumor is spreading (Yes/No)." You can also adapt more standard benchmarks, like those used to declare public health emergencies.[19,20]

4. Note whether the benchmarks for any criteria have been met. In the "Benchmark Met?" column, add a "1" if your benchmark was met and "0" if your benchmark was not met.

5. Indicate how important each factor is in influencing your decision whether to act to address the current rumor or situation. In the "Importance" column, add a "0" if the factor is not important, "1" if it is somewhat important, and "2" if it is very important.

   Tip: Definitions of importance will vary from organization to organization. Make sure that everyone who is filling out this worksheet has a consistent understanding about what each score means. Designate someone as the point person for filling out this worksheet and gathering the team's input.

6. For each row in the worksheet, calculate a composite score by multiplying the "Benchmark Met?" score with the "Importance" score.

7. Add up all composite scores and note them at the bottom of the worksheet.

> 🔍 **Why fill out this worksheet?**
>
> The worksheet in Table 1 helps simplify the process of deciding whether to respond to a rumor by breaking it down into smaller steps, as shown in Figure 3. You should consider all the factors that influence your decision to take action. Then, benchmarks for action need to be met to proceed, and altogether, these factors need to be important enough to trigger action.
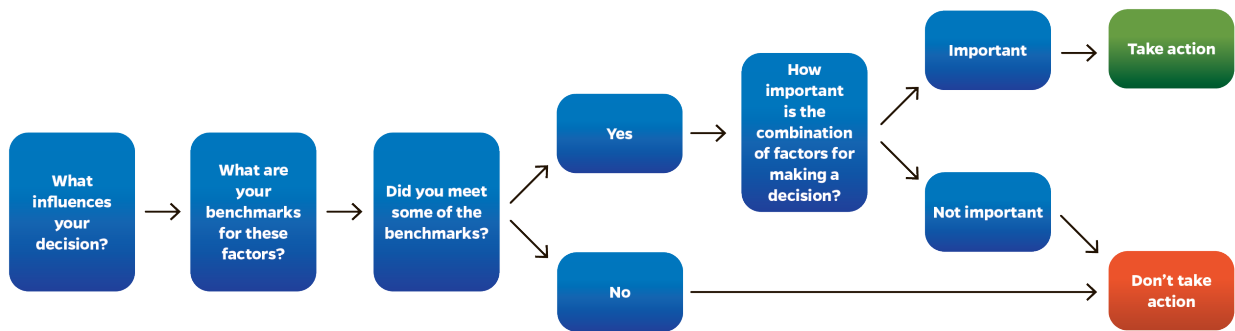
Figure 3. Decision-making process to decide whether to respond to a rumor

Table 1. Tool to prioritize criteria that inform decision-making on acting to address misinformation

Decision criteria	Criteria definition	Benchmark	Benchmark met?	Importance	Composite score
Seriousness					
Spread of misinformation					
Impact on public trust					
Population affected					
Where the rumor is circulating					
Impact on institutional reputation					
Type of actor spreading misinformation					
Believability of the rumor					
Impact on health					
Add additional criteria here					
Capacity to act					
Workload of responders					
Value generated by acting					
Funding available for acting					
Availability of evidence needed to act					
Access to trusted communicators					
Amount of time available to act					
Availability of expertise in current workforce					
Knowledge level of audience					
Support from leadership					
Whether clearance is needed to act					
Level of cultural competency					
Add additional criteria here					
Potential consequences					
Amplifying misinformation					
Alienating audiences					
Making inequalities worse					
Becoming a target of harassment					
Being unable to address uncertainty					
Political ramifications					
Being wrong about the facts					
Add additional criteria here					
Other					
Add additional criteria here					
Total composite score					

Step 1.3 Decide whether you will address the rumor

In many cases, addressing a rumor may not be the right choice. You and your team can use the composite scores from Table 1 to decide whether to respond to a rumor by:

- Working together to come up with a minimum total composite score you need to meet to act. If you meet or exceed this score, you automatically act.

- Deciding whether any decision criteria will immediately trigger action (eg, if a rumor is resulting in high levels of immediate harm to health). If this benchmark is met, action is required.

- Alternatively, noting any decision criteria that would prohibit action, even if the minimum total composite score is met (eg, not enough staff or funding are available to carry out actions).

Also note that you may need to add a final point of decision-making, such as getting approval from leadership.

> 💡 **Tip:** *Usually, quick decisions are needed about whether to respond to rumors, even though you might need more evidence before acting. You should keep revisiting your decision-making criteria, especially when a public health issue is escalating, rumors are evolving, and more evidence is coming out, to note if anything changes and impacts your decision to act or not act.*

> 🔍 **How do you adapt decision-making during emergencies?**
>
> During public health emergencies, misinformation management processes may need to be altered or accelerated in the following ways:
>
> - **See how social listening needs change.** If you are expected to do more social listening and reporting on rumors in real time, you will need to revise how you listen to, inform people about, and respond to viral rumors.
>
> - **Consider how priorities change during an emergency.** Changing priorities may affect the factors that influence your decision-making and alter the actions you choose to take. For example, if your organization's priority is to address misleading rumors as quickly as possible, you may need to identify rumors more rapidly.
>
> - **Recognize which processes need to move more quickly.** You may need some processes to go faster, like data collection and research activities, to fill gaps in information or internal decision-making within your agency.
>
> - **Plan to take some steps in advance.** You can carry out actions that require less contextual response in advance, like creating messages to prebunk common rumors and inoculate the public against them.
>
> - **Get teams and partners ready for action**. You should reach out to communities and partners with whom you established relationships prior to the emergency and mobilize them to work with you to tackle misinformation and build trust. You could also call on surge teams to help with staffing if needed and available.

⏩ **If you have more time and resources:**

- Conduct more systematic assessments like preparing a risk evaluation matrix to unpack a rumor, recognize why it went viral, and understand its potential impact.

    🔨 [UNICEF: Vaccine Misinformation Management Field Guide: Figure 3: Risk evaluation matrix](#)

- Collect information gathered from informal and formal social listening systems to compile an insights report.

    🔨 [WHO/UNICEF: Infodemic Insights Report](#)

- Evaluate how your organization makes decisions and adapt this playbook's decision-making suggestions accordingly. Use existing frameworks to make decisions one step at a time in a deliberate but flexible way during a crisis.[21,22]

    🔨 [The Decision Lab: Observe, Orient, Decide, Act (OODA) Loop](#)

- Notice how some mental blocks potentially hurt your ability to make decisions during a crisis (eg, wanting to delay a decision because you are afraid of failing or only searching for information that confirms what you already know).[23]

Step 2: Take action to address misinformation

Follow the steps outlined in this section and summarized in Figure 4 to identify how you can address misinformation via strategically crafted messages. This section includes mini worksheets for each step to help you make decisions in a methodical manner; these smaller worksheets appear as one comprehensive worksheet in Appendix C: Message Development Worksheet.

Step 2.1	Step 2.2	Step 2.3	Step 2.4	Step 2.5	Step 2.6
Identify the type of misinformation that is spreading	Characterize your priority audience and your communication goals for them	Choose an action approach	Select communications channels and trusted messengers	Choose strategic ways to frame your messages	Create and disseminate your messages using good practices

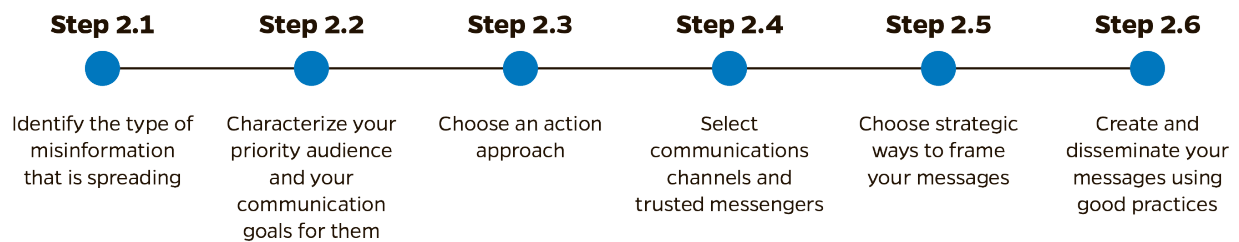**Figure 4.** Overarching steps for acting to address misinformation

Step 2.1: Identify the type of misinformation that is spreading

Step 2.1   Step 2.2   Step 2.3   Step 2.4   Step 2.5   Step 2.6

Identify the type of
misinformation
that is spreading

During an escalating public health issue, rumors can weaken trust in public health and negatively affect communities' health. Although rumors may seem unique, they often repeat common narratives.[7,24] Some common rumors talk about:
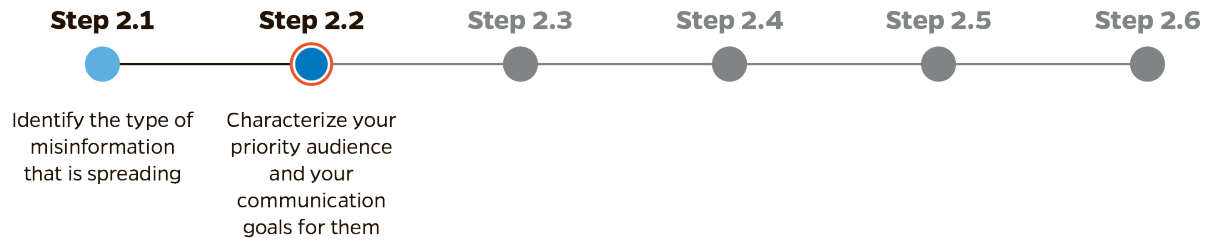
- Safety of approved, authorized, or unapproved interventions
- Efficacy of approved, authorized, or unapproved interventions
- Updates to or changes in guidance
- Dismissing or exaggerating the risk or severity of a health condition
- Dismissing or falsely attributing the cause of a health condition
- Narratives decreasing trust in a health agency or organization
- Narratives decreasing trust in individuals implementing interventions
- Narratives based on epistemological differences (ie, how people know/understand the world around them)
- Blaming or stigmatizing a population as the cause or spreader of a health condition
- Confusion around previous messaging
- Desire for certainty when the situation is uncertain

You should work to understand the type of rumor that is circulating, deconstruct it to show what the rumor aims to do, and identify what information, if shared with people, would resolve the rumor. You should also identify the level of risk the rumor poses to people's health and wellbeing, as a high-risk rumor may need a more proactive response like prebunking or inoculation. Fill out Table 2A to organize this information.

Table 2A. Message development worksheet: identify the kind of misinformation you see

Q	Guiding question	Your answer	Notes
1	What is the rumor?		Use approaches in the Set up a way to identify misinformation section to understand the rumor and its level of risk.
2	What type of misinformation is it? State why it is this type of misinformation and what information would discount or address it.		
3	What level of risk does this rumor pose?		If the level of risk is HIGH, you may need to prebunk or inoculate people against the rumor as soon as you detect it.

Step 2.2: Characterize your priority audience and your communication goals for them

Step 2.1	Step 2.2	Step 2.3	Step 2.4	Step 2.5	Step 2.6

Identify the type of misinformation that is spreading | Characterize your priority audience and your communication goals for them

In the Get to know your audience section, you learned how to understand your audiences' trust levels.

🔨 Appendix B: Audience Persona Characterization Tool

Upon detecting rumors, you should create a priority list of target audiences to reach with your message and focus efforts on audiences at the top of this list:

⚠️ **Priority 1:** If a rumor disproportionately impacts certain populations or is more likely to be believed by specific populations, those populations should be at the top of the list. For example, rumors about pregnancy complications will disproportionately impact pregnant people, so messages that fill information voids to counter this rumor should first reach pregnant people.

⚠️ **Priority 2:** Then, you can direct messages at general audiences, often in tandem with partner organizations or individuals who have already built rapport with target audiences (including news media, social and digital media influencers, community organizations, and healthcare organizations). General audiences include people who are part of the "movable middle," that is people who are not on the extremes of an issue, those who are unsure about what the truth is, and those open to changing their behavior.[‡]

⚠️ **Priority 3:** Last, if appropriate and deemed potentially effective, you can include some messaging efforts for people who are spreading misinformation.

To reach low-trust populations, promote better uptake of messages, and build overall trust in public health, you should prioritize partner organizations in your efforts. Many trusted messengers and community organizations have a long history of working with populations that may be disproportionately impacted by a rumor but don't always trust public health practitioners easily.

💡 *Tip: When resources are limited, it is okay to focus efforts on people who are disproportionately impacted by a rumor or likely to believe it. It can take considerable time and resources to reach general audiences.*

---

‡ Nick Moran and Lindsay Smith Rogers, MA, private correspondence, October 2023

For each priority audience, you should select relevant communication goals (as shown in Figure 5) and rank these goals in the same order as their audiences. Usually, you should aim to:

1) Increase awareness of accurate health information;

2) Increase the ability to detect false information; and/or

3) Increase understanding of factual alternative explanations for misleading information.

Please note that this is not an exhaustive list of communication goals when responding to misinformation; for instance, providing people who are spreading the rumor with factual explanations may not be enough to deter them.

💡 **Tip**: *Work with trusted partners and secondary messengers when choosing an action approach and developing messages for priority audiences. They should be a part of your message dissemination strategy to improve the reach and uptake of your messages among priority audiences.*

Messaging goals and audiences

Increase awareness of accurate health information

| General audiences | People disproportionately impacted by the rumor | Partner organizations | People who are most likely to believe the rumor | People spreading rumors |

Increase people's ability to detect false information

| General audiences | People disproportionately impacted by the rumor |

Increase understanding of factual alternative explanations to misleading information

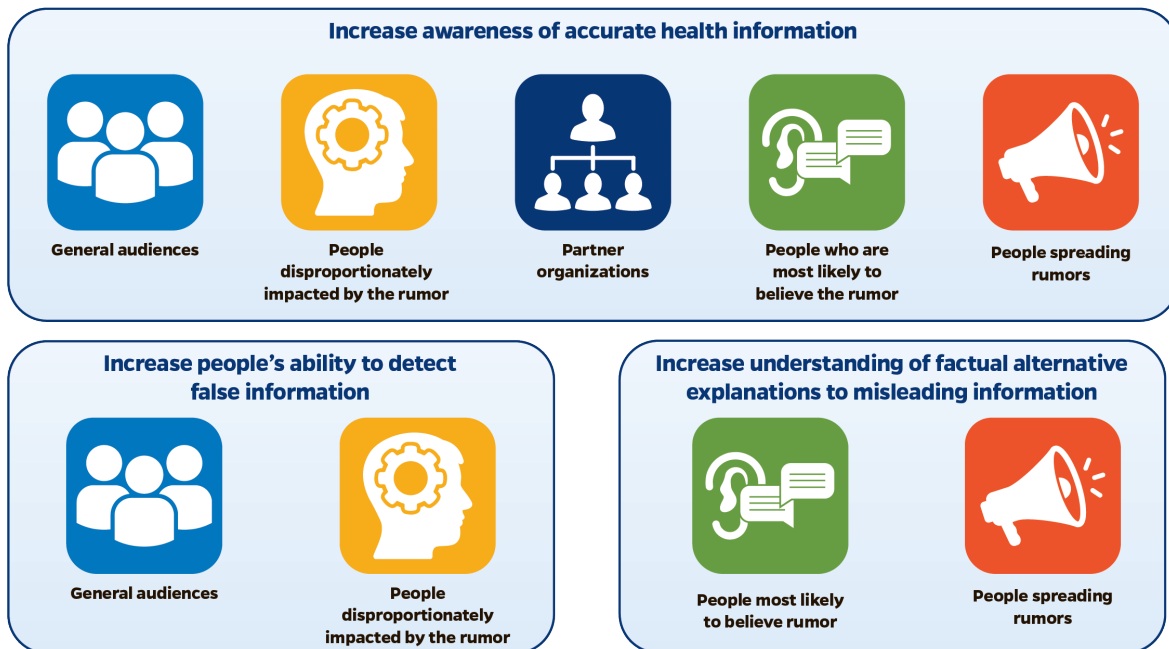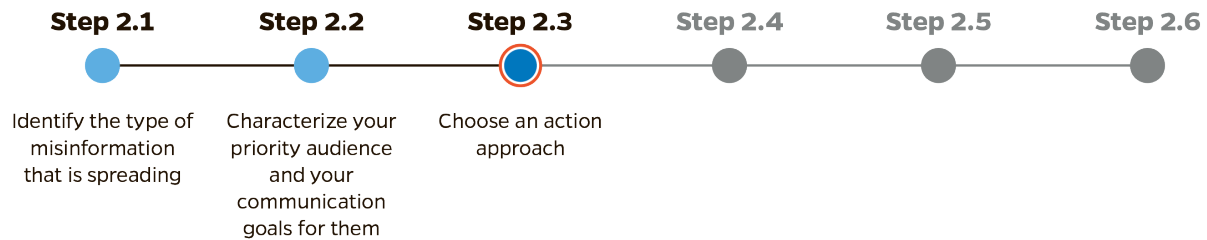| People most likely to believe rumor | People spreading rumors |

Figure 5. Identifying priority audiences for message development based on communication goals

Fill out Table 2B to organize this information.

Table 2B. Message development worksheet: characterize your priority audience and your communication goals for them

Q	Guiding question	Your answer	Notes
4	Who is spreading the rumor?		
5	Does the rumor disproportionately affect any populations? Explain		If YES to either, prioritize these respective populations before others. If NO or unclear to both, prioritize other groups as discussed below.
6	Are some people more vulnerable to believing this rumor? Explain		
7	Would a message from your organization or partner organization(s) stop people who spread this rumor from doing so? Explain		If YES to all, add general audiences and partner organizations, then people who are spreading the rumor to the priority list. If NO to any, prioritize general audiences.
8	Does the community perceive your organization to be a trusted messenger? Explain		
9	Do you work with any partner organizations that are trusted messengers for people spreading the rumor?		If YES, co-create tailored messages intended for priority audiences with them and disseminate through their channels, in addition to your own efforts. If NO, focus on people who are likely to believe and be most impacted by the rumor, as well as general audiences.
10	Who are the priority audiences for your message?		
11	What additional information do you need to consider about these audiences when creating messages?		Consider factors like audiences' priorities, values, questions, concerns, needs, beliefs, etc.
12	What are your communication goals? List them in an order that aligns with your priority audiences.		Use guidance from Figure 5.

Step 2.3: Choose an action approach

Step 2.1	Step 2.2	Step 2.3	Step 2.4	Step 2.5	Step 2.6
Identify the type of misinformation that is spreading	Characterize your priority audience and your communication goals for them	Choose an action approach			

You can build on priority communication goals and draw from research and recommended practices to decide how to respond to and manage misinformation.[25]

🔨 [4 i Framework for Advancing Communication and Trust (4 i FACT)](#)

For every priority audience, first focus your efforts on actions that increase awareness of accurate health information, then move to other action approaches as appropriate, as shown in [Table 3](#).

🔍 **Providing factual alternative explanations**

When deciding on an action approach, it is important to understand that simply stating that misinformation is incorrect, questionable, or coming from a source that is untrustworthy is unlikely to dispel rumors. Providing information that addresses a gap in understanding and explains more about the issue—or factual alternative explanations—can be an effective communication goal. By introducing these factual alternative explanations, you are giving individuals a corrected, more thorough view of the issue, which may help to shift their initial understanding of the issue. It is crucial that the alternatives are robust but not too complex and maintain the same explanatory appropriateness as the original misinformation.

🔨 [The Debunking Handbook 2020](#)

💡 *Tip: Think about how your institution's needs and capabilities affect which action(s) you choose. **Actions at the top of [Table 3](#) require fewer resources, while actions at the bottom require more resources.***

Table 3. List of action approaches (with examples) based on priority communication goals

Communication goal	Action approach	Action example
Increase awareness of accurate health information AND increase people's ability to detect false information	**Amplify accurate information:** Share accessible, accurate, tailored, and culturally appropriate information from first-hand or other trusted sources, or point people to credible sources of information.[26] Exposing individuals to factual information may make it easier for them to resist false information when they come across it.	Dear Pandemic was a social media account that provided easily understandable, factual information about COVID-19 and other public health issues to Instagram users. The account transitioned to Those Nerdy Girls.
Increase awareness of accurate health information	**Fill information voids:** Quickly provide easy-to-understand, credible, accessible, and correct information to answer common questions or fill knowledge gaps.[10]	The Conversation: Between Us, About Us is a series of videos in which healthcare workers of color answered common questions about COVID-19 and vaccines to dispel misinformation. The videos targeted racially marginalized communities and people with high vaccine hesitancy. See also: A Q&A video with the CDC Director on Instagram to educate pregnant people about COVID-19, flu, and RSV vaccines.
	Leverage trusted messengers and engage communities: Use spokespersons who are trusted by your priority audiences to convey key messages and encourage community participation in health communication.[6,27] Leveraging trusted messengers can be a low-cost way to build trust.	The International Vaccine Access Center at Johns Hopkins University partnered with the African-American faith community and Historically Black Colleges and Universities in Baltimore to provide information about flu and COVID vaccinations and set up vaccine clinics in churches and other trusted community venues.
Provide factual alternative explanations	**Refute, fact-check, or debunk:** Refute false claims by highlighting factual errors (fact-based debunking), providing other explanations, identifying flawed reasoning or logical fallacies (logic-based debunking), and/or by calling into question the credibility of the source of false information (source-based debunking).[28–30]	When Nicki Minaj tweeted that the COVID-19 vaccine had caused an acquaintance in Trinidad to develop swollen testicles and impotence, the Health Minister of Trinidad and Tobago debunked the claim and stated there was "absolutely no reported such side effect or adverse event of testicular swelling in Trinidad" (fact-based debunking).
Increase people's ability to detect false information	**Prebunk and inoculate:** Preemptively refute anticipated false information or manipulation tactics before people are exposed to a rumor, which protects them from believing in the rumor when it comes up.[31] This often involves educating people about common tactics of deception or manipulation and encouraging more critical thinking. This step is best done before a rumor arises, as shown in the Set yourself up for success before rumors escalate section.	Go Viral! is a free online game that teaches individuals about common manipulation/deception tactics that are used by purveyors of false information. The game has been shown to increase individual's confidence in their ability to identify misinformation and reduce their reported willingness to share misinformation.[32]
	Improve health and science literacy: Enhance public understanding of scientific and health principles by explaining key concepts and processes, such as common public health terms, how research is done, and how to spot common logical fallacies when looking up information online.	The group of women researchers and clinicians who make up Those Nerdy Girls regularly disseminate easy-to-understand articles and social media posts about scientific processes and principles, including one about the evolving nature of science and scientific guidance.[15]

Furthermore, you can adjust these core actions to address misinformation more effectively and avoid negative consequences. Recommendations for doing so are listed in Table 4.

Table 4. Guidance for improving effectiveness of actions and avoiding negative consequences

DO	DON'T
Action: General	
√ Be empathic. People may feel confusion or fear during uncertain times. √ Be consistent. Have communicators and spokespeople coordinate messaging strategies.[33] √ Be credible. Rely on sources with relevant expertise.[23,34] √ Customize content for specific target audiences. √ Plan ahead. Have a strategy in place to respond if bad actors seize messages and use them to further their own agendas. √ Have a plan to swiftly address and fill information voids in case a message accidentally amplifies misinformation.	× Use scare tactics to change people's beliefs.[35] × Repeat false information unnecessarily. × Ignore behavioral and social evidence when designing messages, especially for vaccine hesitant groups who care about efficacy, safety, and disproportionate risks to vulnerable communities.[4] × Refuse to acknowledge when the public received incorrect guidance from official or reputable sources. × Ignore potential consequences from being too slow/fast to correct misinformation, rushing to fill information gaps even though scientific evidence is still evolving, and looking like you're out of the loop.
Action: Amplifying accurate information	
√ Use messages that strongly appeal to morals and emotions like disgust and compassion, but not panic.[36,37] √ Improve audiences' ability to judge the credibility of sources sharing information related to a rumor, such as by assessing the reputation of a source, whether the author is qualified to discuss the issue, how accurate the information is, etc.[38] √ Empower audiences to amplify factual information in their circles.[§]	× Worry that reframing messages may negatively impact people outside your target audience. Evidence suggests this is unlikely.[36] × Ignore possible problems, such as others twisting your messages or public officials or influencers discrediting you to further their own agendas.
Action: Filling information voids	
√ Act quickly before other actors can fill the void with misinformation. √ Adapt content into different languages. Be sure to maintain the original tone, intent, and style. √ Use simple language and graphics.[28,39]	× Wait to act. It's okay to fill information gaps even as scientific evidence is still evolving. × Create generic content that is not tailored to diverse audience needs and beliefs.[40] × Assume that translating materials into other languages is enough to reach diverse audiences.[26] × Assume that telling people about their individual risk of disease will influence their actions.[41] Overemphasizing individual risk may actually increase a person's unrealistic optimism in not getting or transmitting a disease, particularly as a coping mechanism.[42]
Action: Leveraging trusted messengers and engaging communities	
√ Collaborate with communities to develop culturally appropriate messaging. √ Empower trusted messengers from the community to disseminate accurate information and reject false information.[28] √ Use an in-group spokesperson to better connect with your intended audience.[36,43] √ Reframe messages to align with the audience's most important values.[36]	× Overburden resource-limited community organizations with more unpaid work. × Reinforce harmful social norms.

§ Nick Moran and Lindsay Smith Rogers, MA, private correspondence, October 2023
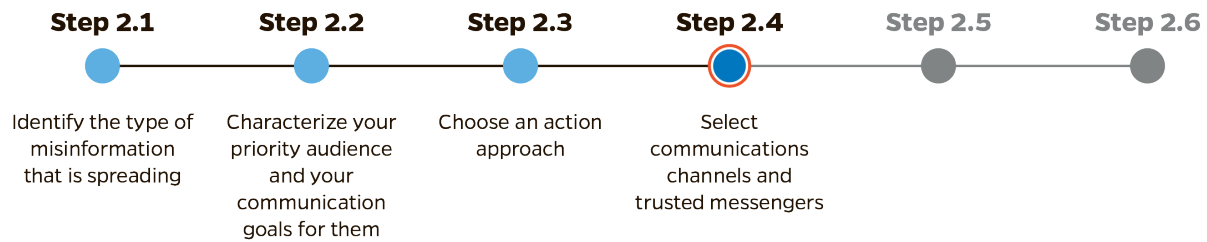
DO	DON'T
Action: Refuting, fact-checking, debunking, prebunking, and inoculating	
√ Provide enough detail.[44] √ Offer factual alternative explanations when correcting false information.[45] √ Warn readers that you're going to repeat false claims in order to debunk the rumor.[45] √ Repeat the guidance you want people to follow. Repetition can increase retention.[46] √ Be empathetic. Conspiracy theories can serve as a coping mechanism during periods of perceived danger or uncertainty.[29] √ Affirm audience identity before providing corrections that could threaten their views.[28] √ Consider using different types of debunking: fact-based, logic-based, and source-based debunking techniques have all been successful for general audiences.[29] √ Encourage the original sources to provide rumor corrections.[47] √ Make debunking messages "sticky"—keep language simple, use familiar phrases, and repeat debunked messages.[48,49] √ Be prepared for rumors to persist—even after debunking.[44] √ Provide an "accuracy nudge" to prompt users to consider the reliability of a rumor.[50]	× Alienate your audience. Do not prioritize fact-checking rumors if it means you're attacking deeply held beliefs.[51] × Overcomplicate your response. People may reject complex information in favor of simpler (but potentially inaccurate) information.[45] × Repeat false information more than once in a correction. Repetition can increase belief in false information.[28,45] × Try to debunk conspiracy theories if the audience consists of true believers, as this could do more harm than good.[29,52] × Wait to debunk a rumor; as time passes from when someone hears the original rumor, it gets more difficult to change their beliefs.[51] × Discount the role experts can play in correcting misinformation. In some cases, corrections can be more effective when communicated by an expert compared to a non-expert.[53] × Ignore emotions. Misinformation that arouses negative feelings in people may be easier to correct than misinformation that does not arouse any significant emotion.[54]
Action: Improving health, science, and media literacy	
√ Prepare audiences for the possibility that guidance and messages may change.[55] √ Strike a balance between acknowledging uncertainty and providing the public with concrete facts.	× Simply replace old information with new information without explaining why the old information is no longer accurate.[55] × Over-reassure people during uncertain situations. You may lose credibility when/if your guidance needs to change.

Fill out Table 2C to organize this information using the above guidance.

Table 2C. Message development worksheet: choose an action approach

Q	Guiding question	Your answer	Notes
13	Which action approach(es) will you use? List them by audience.		If you responded HIGH RISK to Q3, prioritize prebunking and inoculation. Use guidance from Table 3.

Step 2.4: Select communications channels and trusted messengers

Step 2.1	Step 2.2	Step 2.3	Step 2.4	Step 2.5	Step 2.6
Identify the type of misinformation that is spreading	Characterize your priority audience and your communication goals for them	Choose an action approach	Select communications channels and trusted messengers		

The best communications channels for a message that addresses misinformation are the platforms on which the rumor is spreading. Prioritize these channels by how accessible messages will be to targeted audiences and how they will maximize message reach. For example, if a rumor is spreading on social media and mostly affecting underinsured groups, don't prioritize disseminating messages through brochures and posters in doctors' offices where the intended audience might not see them. Add other channels—like social media, in-person engagements, and traditional and digital media—to your priority list based on the channels' popularity, user-friendliness, and trustworthiness, as shown in Table 5.

Table 5. Comparison of common channels used to disseminate anti-misinformation messages

In-person activities	Social media	Traditional & digital media
Benefits		
√ Connect with the public in a more targeted and intimate way. √ Work through trusted partners for better impact. √ Help build long-term trust. √ Distribute fact sheets and flyers at community events and other meetings, which can prompt useful discussions.[3]	√ Less expensive. √ Personal, rapid way to connect with the public.[56] √ Use content calendars and social media management tools.[57] √ Easy to post text, graphics, videos, and external links. √ Allows for dynamic and interactive features, discussions, and livestreams.[57,58] √ Easy to access and assess analytics.[59]	√ Reaches broad audiences. √ Can use efficient talking points when convening media partners.[57] √ Ability to explore rumors in more depth. √ Webpages can be engaging.[57] √ Lots of options, such as print, radio, podcasts, and local TV.[60]
Appendix A: Checklist to Improve Trust	CARE USA: Using Social Media to Drive Public Health Outcomes FrameWorks: Social Media Message Templates Community Tool Box: Implementing Social Marketing	Article: Podcasting as a Tool for Crisis Communications CDC: Health Communication Playbook: Media Communications
Drawbacks		
× Time-consuming and possibly costly to organize. × Require some relationships to exist before a rumor emerges. × Slower process for addressing misinformation, which often changes quickly.	× Accidental misinformation spreads and amplifies rapidly. × Risk of trolling and harassment if sharing messages about controversial issues. × Message visibility depends on the platform's algorithms. × Audience may lack digital access. × Platforms have different audiences.	× Perceived biases of some news media outlets can be a barrier for uptake of messages. × Requires more permissions and partnership with media outlets.

Share and amplify messages across platforms that your target audiences view as trustworthy, work with trusted messengers to co-create and disseminate messages, and engage partners and communities to help with increasing the reach and uptake of messages among priority audiences.

🔨 Appendix A: Checklist to Improve Trust

Fill out Table 2D to organize this information.

Table 2D. Message development worksheet: select communications channels and trusted messengers

Q	Guiding question	Your answer	Notes
14	On which platform(s) is this rumor spreading?		
15	Which communications channels will you prioritize for disseminating your message?		Prioritize based on Q14 but add others, like partners' preferred platforms. The format, character limits, structure, and framing of the message you develop in Q23 will depend on the communications channel you choose. Use guidance from Table 5.
16	Which organizations, businesses, online or community influencers do priority audiences trust? List them in order of preference by audience.		Co-create messages with these parties and include them as disseminators.
17	List the trusted sources and partners that will serve as messengers.		
18	List other considerations that inform your message dissemination strategy.		

Step 2.5: Choose strategic ways to frame your messages

Step 2.1	Step 2.2	Step 2.3	Step 2.4	Step 2.5	Step 2.6
Identify the type of misinformation that is spreading	Characterize your priority audience and your communication goals for them	Choose an action approach	Select communications channels and trusted messengers	Choose strategic ways to frame your messages	
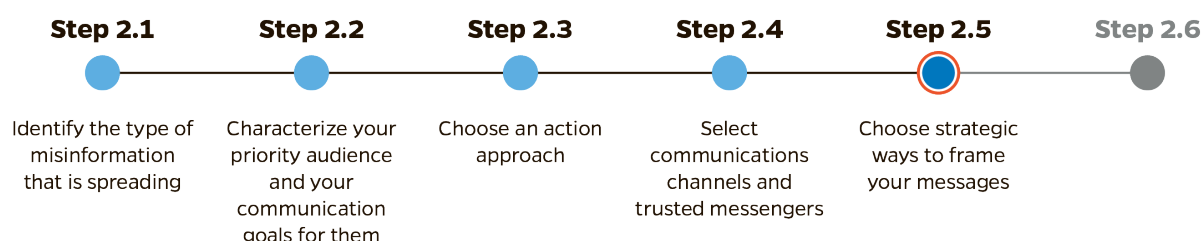
Audiences interpret messages in diverse ways. Knowing the lenses they use to understand messages can help you choose and frame messaging appropriately. Select from the following list of common message framing techniques, which have a stronger evidence base, and consider other approaches shown in Appendix D: Message Framing Strategies and Templates:

- Match messages to the motivations of audiences, especially framing information that audiences might not accept easily, in a way that aligns with their moral values (moral reframing) and focuses on desirable outcomes or benefits that they get (gain framing).[61–65]

- Appeal to self-serving benefits (self-oriented framing).

- Appeal to improving a positive outcome during crisis (promotion framing) but appeal to preventing a negative outcome during non-crisis times (prevention framing).[66]

- Appeal to health-related consequences of changing behavior (health consequences framing).[67,68]

- Acknowledge uncertainty, as audiences trust messengers who are honest about what is known and unknown during an evolving situation.
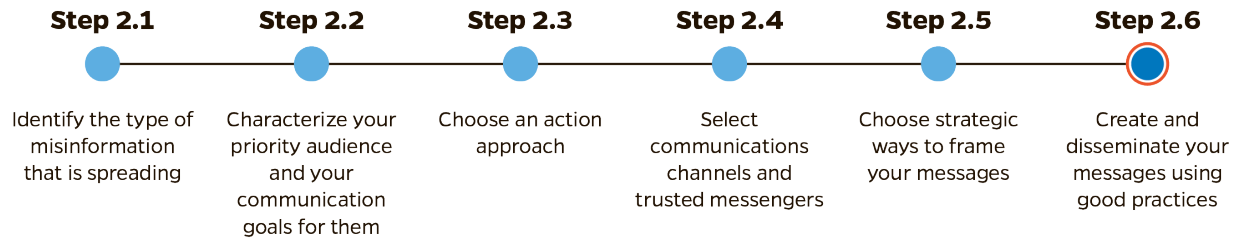
Fill out Table 2E to organize this information.

Table 2E. Message development worksheet: choose strategic ways to frame your messages

Q	Guiding question	Your answer	Notes
19	Are your priority audiences' motivations to change behaviors and beliefs driven by specific benefits or moral values?		If YES, use gain framing or moral reframing techniques for your message. If NO, use other message framing strategies.
20	List any message framing strategies you will incorporate into your message and why.		Consider the motivations of your priority audiences. Use resources from Appendix D: Message Framing Strategies and Templates.
21	List any message framing templates you might use to create your message.		
22	How will you tailor your message to match your priority audiences?		Remember to tailor based on your answers to Q15-18.

Step 2.6: Create and disseminate your messages using good practices

Step 2.1	Step 2.2	Step 2.3	Step 2.4	Step 2.5	Step 2.6
Identify the type of misinformation that is spreading	Characterize your priority audience and your communication goals for them	Choose an action approach	Select communications channels and trusted messengers	Choose strategic ways to frame your messages	Create and disseminate your messages using good practices

Incorporate good practices to construct effective anti-misinformation messages, as follows:

Structure	☐ Develop a skeleton format for your message based on your communications channel. A Facebook post, Instagram post, newsletter, or town hall script each require different inputs.
	☐ Create a communication format to use during public presentations of information. For example, start messages with an introductory statement that is empathetic and culturally appropriate, share 3-5 key messages, and finish with a conclusion that summarizes your point.[3(p46),69]
	🔨 CDC: Health Communication Playbook: Identify Key Messages and Talking Points Worksheet.
	☐ Provide action items and key takeaways before the message gets too detailed or complicated.
	🔨 FrameWorks: Order Matters
	☐ Use key messages and talking points that consider the 6 Ws:[57] **What** is the action? **When** should the action take place? **Where and who** should take action? **Why** should the public act? **Whose** advice is being shared?
Language	☐ Use everyday words, short sentences, second person point of view, and active voice.
	☐ Avoid jargon. Ensure content is simple, concise, empathetic, memorable, tailored, and impactful.[70]
	🔨 PHCC: Plain Language for Public Health
	☐ Say the most important information first.
	☐ Present information in bulleted lists.
	☐ Provide descriptive links.
	☐ Provide information in accessible and alternative formats (eg, Braille, text-to-voice, or American Sign Language).[71]
	🔨 Federal Social Media Accessibility Toolkit
	🔨 CDC: Tool for Developing Products for Adults with Intellectual Developmental Disabilities and Extreme Low Literacy
Tone and Visuals	☐ Address claims directly, lead with empathy, and provide detail and context.[70]¶
	☐ Add value statements (eg, "we have a duty to protect each other").[72]
	☐ Use a casual tone to be more approachable or use a professional tone for more authority.[73]
	☐ Be intentional with word choice (eg, talking to audiences as if they were a friend).
	🔨 CDC: Simply Put: A guide for creating easy-to-understand materials
	☐ Use culturally sensitive humor to avoid offending people.[74]
	☐ Select design elements, layouts, color schemes, and images that resonate well with audiences.
	🔨 CDC: Health Communication Playbook: Use Design and Layout Effectively
	☐ Use hashtags and social media trends to make messages more relatable and far-reaching.

¶ Nick Moran and Lindsay Smith Rogers, MA, private correspondence, October 2023

💡 **Tip:** *If you don't have a lot of time to create a message, use large language models (LLMs) to create a starting point for messages and then modify them to better fit with good practices suggested in this playbook, as shown in* Appendix E: Developing Messages Using LLMs.

Fill out Table 2F to organize this information.

Table 2F. Message development worksheet: create and disseminate your messages using good practices

Q	Guiding question	Your answer	Notes
23	Share the message(s) you have created. State the target audience(s) and dissemination channel(s) for each.		Adapt based on your communications channels from Q15 and message framing techniques from Q19-22.
24	Did you incorporate good practices related to language, tone, visuals, structure, etc.?		If YES, proceed to dissemination. If NO, incorporate good practices for quality assurance or accept consequences of not doing so.
25	What are some underlying assumptions of your message?		
26	What are some potential pitfalls of your message and how will you address them (if at all)?		

🔍 **Use new technologies to address misinformation.**

Evolving technologies can both assist and inhibit the process of addressing misinformation. The full impact of new technologies on the spread of misinformation is still unknown, but there are tools that can be used to enhance engagement and reach. Using large language models (LLMs) and artificial intelligence (AI) technologies, like ChatGPT, may be useful to create tools like audience personas[3] (see Appendix B: Audience Persona Characterization Tool) that can assist in modeling demographic information of the target audience and help inform strategies for engagement. These personas can serve as useful guides when crafting communication plans and specific messages or graphic materials. LLMs can help with social listening[75] and to generate sample messages,[76] which you can then feed through systematic checklists or align with practices recommended in this playbook for quality assurance (see Appendix E: Developing Messages Using LLMs). If you are short on time, you can adapt existing health communication resources and effective assets from other reputable organizations.

Step 2.7: Even if you can't act, address misinformation in other ways

Often, resources are stretched too thin to prioritize addressing misinformation, and it is difficult or not productive to respond to every rumor. However, if you want to support actions to address misinformation in other ways, you can:

☐ **Leverage strategic partnerships.** Continue to coordinate, build relationships, and work creatively with internal and external partners, like the Association of State and Territorial Health Officials (ASTHO), state and county agencies, and community organizations, that can address misinformation as part of their work.

☐ **Amplify (trusted) influential voices.** Help local or national influencers to amplify anti-misinformation messages that other trusted organizations or individuals share.[77] Let partners know how they can reduce misinformation in times of crisis, such as by creating resource repositories.

🔨 [ASTHO: COVID-19 Public Health Communications Resource Hub](#)

☐ **Attend community outreach events.** Show up at community events and be available to your community as a resource for addressing rumors in a more casual setting. [Appendix A: Checklist to Improve Trust](#) includes some approaches for being present in communities.

☐ **Track potential consequences of not taking action.** Without intervention, viral rumors may continue to spread and might result in tangible, negative impacts on community health.[78] Watch for these negative impacts by using social listening tools and asking community partners to report them. Sometimes, negative impacts warrant reevaluation of the need to respond. You can track emerging scientific evidence, results from public polls, comments and interactions on social media platforms, and news reports that draw on public opinion.

⏩ **If you have more time and resources:**

- Address misinformation using institutional-level actions during times of stability, like shortening the internal review process for messages or having a quick-acting contract mechanism in place so you can hire external messengers and partners to create customized messages more rapidly during an escalating public health issue.[25]

- Include 2-way dialogue methods that encourage people and practitioners to engage with each other, work together to build trust in public health, and communicate openly about how people react to anti-misinformation messages.[3] This might involve hosting town halls, actively interacting with people who comment on social media posts, attending community engagement events, and holding in-person listening sessions.

- Use social media advertising tools, produce paid marketing campaigns, and build a cohesive social media communication campaign to share messages consistently with the public.

  🔨 [CARE USA: Using Social Media to Drive Public Health Outcomes](#)

- Build trust by leaning on trusted messengers to share anti-misinformation messages and engage communities. Building trust requires a focus on repairing relationships both before and during a public health event.

  🔨 [Appendix A: Checklist to Improve Trust](#)

- Shift social norms that allow some rumors to spread by empowering the audience to change how they think and behave.

- Improve health, media, and science literacy by teaching audiences to think critically about information and the scientific process.

Step 3: Evaluate anti-misinformation messages

Understanding the impact of your message can be difficult, especially when communication needs are greatest. You can gather feedback about your message in different ways:

☐ Test whether your messages are readable, accessible, relevant, or effective.[79] You can employ common user testing methods, which can help make sure that users can read and understand your message.

   🔨 [PHCC: Plain Language for Public Health: Step 3 Review and Testing](#)

☐ Track how well you distributed your message and who it reached.[80] For instance, when you share messages using social media, you can use the platform's analytics and advertising tools to understand how well you connected with your intended audience, how many people your message reached, how many people interacted with your content, and more.[14,81–83] Gathering this information can help you make sure that your intended audience is receiving your messages.

☐ Talk with your community. You can ask community members, partners, and people you connect with in-person or virtually about their thoughts on your messaging and its impact on the target audience. They may be able to share what they think about your content or what community members have said, and you can then adjust your messages to address any concerns.

⏩ **If you have more time and resources:**

- Come up with key performance indicators (KPIs) or practical ways to measure your progress.

   🔨 [CDC: Key Indicators of Scientific Influence](#)

   🔨 [National Cancer Institute: Constructs and Measures for Health Behavior](#)

- Carry out message testing more methodically to see whether your messages are reaching the intended audience, being understood in the way you want, and having any short-term impacts.

- Evaluate the extent to which messages have led to short-term or long-term changes, especially in the behaviors, beliefs, or practices of the target audience.[13] You can use specific techniques to determine impact, like comparing baseline and endline outcomes, comparing 2 versions of a message to each other, or asking targeted user-experience questions.[84]

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Appendix A: Checklist to Improve Trust

This checklist provides guidance for how to improve trust and communication in the context of an escalating public health issue facing an environment of misinformation.[1]

Growing Critical Communication Capacities

☐ Action 1: Build and maintain a public health emergency preparedness and response (PHEPR) communication team that is well-prepared to meet the challenges of communication activities during escalating public health issues and reflective of the community it serves.

    ☐ Identify and characterize existing communication team assets

    ☐ Establish and pursue avenues to remedy any gaps in skills or knowledge

    ☐ Recognize and address threats to building and maintaining a communication team

☐ Action 2: Ensure that existing budgetary, operations, and financing approaches for PHEPR communication activities reflect prospective needs during an escalating public health issue.

    ☐ Create a comprehensive picture of current PHEPR communication funding

    ☐ Curate alternative resources that may be deployed before or during an escalating public health issue

    ☐ Prepare operational strategies in anticipation of just-in-time emergency disbursements

    ☐ Streamline bureaucratic and operational processes that hinder responding in feast or famine financing conditions

☐ Action 3: Know your audience and their history with public health.

    ☐ Discern target audience characteristics

    ☐ Understand your target audience's history with public health and related institutions

Building Relationships with Community

☐ Action 1: Establish public health actors as trusted members of the community.

    ☐ Assess readiness for community-based relationships and partnerships

    ☐ Identify key principles and norms for engaging with communities

    ☐ Be immersed in community spaces and present at local events, initiatives, and meetings

    ☐ Build in mechanisms for sharing decision-making processes with communities

☐ Action 2: Make strategic and intentional investments in building community relationships and partnerships.

    ☐ Conduct assessments to understand community networks and needs

    ☐ Establish a track record of supporting the community in a range of ways, even if small

    ☐ Develop avenues for community members to integrate into the local public health community

    ☐ Prioritize sustainability when building community relationships and evaluate their progress

Creating & Maintaining Strong Partnerships with Trusted Secondary Messengers

☐ Action 1: Create a strategy for incorporating secondary messengers into public health communication efforts with the greatest impact.

    ☐ Conduct an assessment to understand needs of key partners and likely secondary messengers

    ☐ Identify potential strategic partners for secondary messaging

    ☐ Identify public health capacities and resources that can be leveraged as benefits to secondary messengers

☐ Action 2: Develop formal processes to engage and incorporate secondary messengers into message development, distribution, and evaluation efforts.

    ☐ Develop shared expectations with secondary messenger(s)

    ☐ Integrate partners into message development and distribution efforts

☐ Action 3: Cultivate opportunities for informal secondary messenger sharing

    ☐ Leverage informal secondary messengers in virtual spaces

    ☐ Leverage informal secondary messengers in physical spaces

Anticipating Misinformation and Potential Loss of Trust

☐ Action 1: Enable appropriate understanding of what public health is and does prior to an escalating public health issue.

    ☐ Establish regular communication efforts to highlight public health activities

    ☐ Share public health goals and processes

    ☐ Plan robust public feedback mechanisms prior to an escalating public health issue

☐ Action 2: Set expectations for public health response and communication at the start of a public health issue.

　☐ Help members of the public understand issues of uncertainty

　☐ Establish processes and plans for future changes in guidance and understanding of the event

　☐ Set an appropriate communication cadence

☐ Action 3: Establish processes and plans for anticipated rumors.

　☐ Establish information tracking and community listening outposts

　☐ Integrate an understanding of local audience values and needs with expected rumors

　☐ Develop prebunking and inoculation messages

☐ Action 4: Assist members of the public in understanding how to gather necessary decision-making information and remain resilient to misinformation.

　☐ Improve how the public approaches information collection and processing, as well as health and digital literacy

　☐ Reduce barriers to information access

Formulating Key Message Components

☐ Action 1: Determine what goes in the key messages.

　☐ Embrace a communication format for the public presentation of information during an escalating public health issue

　☐ Implement evidence-based strategies to prebunk or debunk rumors

　☐ Consider and apply lessons from existing messaging models

☐ Action 2: Stylize the message components in ways that resonate with target audiences.

　☐ Create an audience persona

　☐ Draft scripts that are tailored to specific audiences and message goals

Maximizing Message Engagement

☐ Action 1: Tailor messages based on an empathetic understanding of the target audience.

　☐ Consider specific needs of the target audience that may influence their perspectives on public health messages

　☐ Engage in dialogue to build trust, increase message effectiveness, and combat misinformation

☐ Action 2: Ensure messages get to target audiences via preferred channels and trusted voices.

    ☐ Tailor the use of communications channels to increase engagement with audiences

    ☐ Identify and integrate trusted messengers into messaging efforts to increase uptake and effectiveness

☐ Action 3: Design messages using tone and visuals that will resonate with target audiences.

    ☐ Increase engagement using eye-catching visuals and other formatting

    ☐ Revise messaging content and tone to increase messaging reach

    ☐ Sync message tailoring actions for maximum effectiveness

☐ Action 4: Regularly evaluate the engagement and impact of PHEPR communication efforts.

    ☐ Select and execute an evaluation process complementary to organizational goals and capacities

    ☐ Link evaluation results to message development and tailoring efforts

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Appendix B: Audience Persona Characterization Tool

This tool helps to identify target audiences and characterize their personas to assist in the development of messages before and during an escalating public health issue.[1] However, care should be taken to avoid stereotyping people while using the tool. Use the template below to organize what you know about your audience and create a fictional audience persona. You can download and edit the tool at this link.

Audience Persona Template - Name	
Image	**Bio**
	Traits & Beliefs **Reasons for Trust / Distrust**
AGE: GENDER: ETHNICITY/RACE: EDUCATION: OCCUPATION: FAMILY: LOCATION: ANNUAL INCOME:	**Motivations** **Preferred Channels**

You can fill out the table below to organize information gathered using audience personas, especially in collaboration with community stakeholders. The included text serves only as an example of the ways the table could be filled out.

Category	Your answers		
Purpose	Prebunk misleading information related to individual risk & help audience anticipate public health messages		
Message Goals	Increase people's ability to detect false information		
Persona & Trust Characterization	High Trust Person *Add characteristics (eg, racial identity, location)*	Low Trust & Adversarial Mindset *Add characteristics (eg, racial identity, location)*	Low Trust & Historically Underreached *Add characteristics (eg, racial identity, location)*
Traits & Beliefs	Trusts authority, expertise, and science	Believes government actions overreach and interfere in individuals' autonomy	Feels their community has been left behind by the government
Motivations	Promoting a healthy community	Sense of control	Care for and protect self, community, and loved ones
Reasons for Trust/Distrust	Positive experiences with medical and government establishments	Lack of transparency in government and public health officials' actions and decision-making	Poor treatment outcomes of people in the community
Preferred Channels	Social media for public health updates	Face-to-face conversations at local community events & religious gatherings	Local newspaper, face-to-face conversations at local community events & religious gatherings
Rhetoric	Highlighting the scientific process	Individual choice and personal responsibility	Shared responsibility
Justification and Citation	Refer to official entities such as CDC, WHO, state public health departments	Refer to official entities in addition to trusted local messengers from shared community	Offer in-person or on-the-phone Q&A sessions from trusted local messengers

References

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Appendix C: Message Development Worksheet

Use the worksheet below to walk through steps outlined in the playbook section Step 2: Take action to address misinformation. You can use the worksheet to respond to a range of rumors that come up during emerging public health issues. You can download and edit this worksheet for your own use at this link.

Q	Guiding question	Your answer	Notes
1	What is the rumor?		Use approaches in the Set up a way to identify misinformation section to understand the rumor you have detected and its level of risk.
2	What type of misinformation is it? State why it is this type of misinformation and what information would discount or address it.		
3	What level of risk does this rumor pose?		If the level of risk is HIGH, you may need to prebunk or inoculate people against the rumor as soon as you detect it.
4	Who is spreading the rumor?		
5	Does the rumor disproportionately affect any populations? Explain		If YES to either, prioritize these respective populations before others.
6	Are some people more vulnerable to believing this rumor? Explain		If NO or unclear to both, prioritize other groups as discussed below.
7	Would a message from your organization or partner organization(s) stop people who spread this rumor from doing so? Explain		If YES to all, add general audiences and partner organizations, then people who are spreading the rumor to the priority list.
8	Does the community perceive your organization to be a trusted messenger? Explain		If NO to any, prioritize general audiences.
9	Do you work with any partner organizations that are trusted messengers for people spreading the rumor?		If YES, co-create tailored messages intended for priority audiences with them and disseminate through their channels, in addition to your own efforts. If NO, focus on people who are likely to believe and be most impacted by the rumor, as well as general audiences.

Q	Guiding question	Your answer	Notes
10	Who are the priority audiences for your message?		
11	What additional information do you need to consider about these audiences when creating messages?		Consider factors like audiences' priorities, values, questions, concerns, needs, beliefs, etc.
12	What are your communication goals? List them in an order that aligns with your priority audiences.		Use guidance from Figure 5.
13	Which action approach(es) will you use? List them by audience.		If you responded HIGH RISK to Q3, prioritize prebunking and inoculation. Use guidance from Table 3.
14	On which platform(s) is this rumor spreading?		
15	Which communications channels will you prioritize for disseminating your message?		Prioritize based on Q14 but add others, like partners' preferred platforms. The format, character limits, structure, and framing of the message you develop in Q23 will depend on the communications channel you choose. Use guidance from Table 5.
16	Which organizations, businesses, online or community influencers do priority audiences trust? List them in order of preference by audiences.		Co-create messages with these parties and include them as disseminators.
17	List the trusted sources and partners that will serve as messengers.		
18	List other considerations that inform your message dissemination strategy.		

Q	Guiding question	Your answer	Notes
19	Are your priority audiences' motivations to change behaviors and beliefs driven by specific benefits or moral values?		If YES, use gain framing or moral reframing techniques for your message. If NO, use other message framing strategies.
20	List any message framing strategies you will incorporate into your message and why.		Consider the motivations of your priority audiences. Use resources from Appendix D: Message Framing Strategies and Templates.
21	List any message framing templates you might use to create your message.		
22	How will you tailor your message to match your priority audiences?		Remember to tailor based on your answers to Q15-18.
23	Share the message(s) you have created. State the target audience(s) and dissemination channel(s) for each.		Adapt based on your communications channels from Q15 and message framing techniques from Q19-22.
24	Did you incorporate good practices related to language, tone, visuals, structure, etc.?		If YES, proceed to dissemination. If NO, incorporate good practices for quality assurance or accept consequences of not doing so.
25	What are some underlying assumptions of your message?		
26	What are some potential pitfalls of your message and how will you address them (if at all)?		

Appendix D: Message Framing Strategies and Templates

The table below provides descriptions of several strategies for framing anti-misinformation messages. These techniques can be useful in developing messages for various audiences.[1]

Table D1. Message framing techniques to create anti-misinformation messages

Technique	Description	Example
Moral reframing*	When the message is intended to present information that an individual would not normally support in a way that is consistent with their moral values.[2]	Wearing a mask is a simple way to keep disease from spreading, which can reduce government interference and increase freedom of movement.
Argument framing	Mention the consequences of an action using conditional "if-then" arguments. This is a familiar way of trying to convince people to follow a course of action.	If you wash your hands after playing with your pet turtle, then you can keep yourself safe from the salmonella outbreak that is going around.
Antecedent variation	Flip the action to either emphasize what people gain or lose from doing or not doing an action. The focus is on the action.	People who don't verify whether a rumor is true will be more likely to fall victim to fake news vs. People who verify whether a rumor is true will be more likely to share accurate news.
Consequent variation	Flip the consequence or outcome to emphasize whether people gain or lose from an action. The focus is on the consequences.	People who verify if a rumor is true will be less likely to share fake news.
Short-term consequences	Focus on outcomes and consequences that manifest immediately.	Vaccines can reduce a person's chances of getting sick.
Long-term consequences	Focus on outcomes and consequences that manifest after some time has passed.	Vaccines can improve herd immunity for our whole community.
Self-oriented consequences*	Focus on consequences for the message recipient.	Vaccines can reduce your chances of getting sick.
Other-oriented consequences	Focus on consequences that happen to other people.	Vaccines can reduce infection risk for immunocompromised people.
Prevention-oriented consequences*	Focus on preventing a negative outcome (prioritizes security).	Keep checking CDC's website to avoid falling for incorrect news about heatwaves from unofficial sources.
Promotion-oriented consequences*	Focus on improving a positive outcome (prioritizes growth).	Keep checking CDC's website to stay up to date with the latest developments.
Health consequences*	Appeal to consequences related to people's health.	Avoid going home to flood-affected areas to reduce your risk of getting infected by contaminated floodwater.

Technique	Description	Example
Non-health consequences	Appeal to consequences related to non-health outcomes that people care about.	Avoid going home to flood-affected areas because you might lose control of your vehicle while driving and cause further damage.
Attribute framing	Advertise strategic features or attributes of an option to sway a person's decision.	Around 23% of people at risk for mpox got vaccinated vs. Around 77% of people at risk are not protected against mpox.
Outcome likelihood framing	Describe a behavior as leading to a certain likelihood of the outcome happening.	Like other routine vaccines, side effects of the updated COVID-19 vaccine are usually mild and go away after a few days.
Risky choice framing	Present the subject with 2 options that force a choice, usually between losing or gaining an outcome.[2]	Potential side effects of vaccinating against COVID-19 are aches, chills, and fever. Potential side effects of getting COVID-19 are hospitalization or death.
Metaphor framing	Make a complex topic easier for audiences to understand by evoking characteristics of another simpler, symbolic concept.[3,4]	Use a row of matches with a gap separating lit matches from unlit matches as a visual aid to depict the value of physical distancing.

* These framing techniques have a stronger evidence base encouraging their use, compared to others.

The following section includes techniques and templates to use when creating messages to address misinformation. You can download and edit these templates at this link.

1. Using crisis and emergency risk communication (CERC) guidance

You can frame messages using the Centers for Disease Control and Prevention (CDC) CERC guidance.[5] The below table shows how this guidance can be applied practically.

CERC considerations	Application
Present a concise message	Avoid jargon, keep it simple, only include relevant information
Repeat the main message	Frequently heard messages can help with retention when uncertainty is high
Give action steps in positives (when feasible)	Tell people what to do, more than what not to do
Create action steps in sets of 3 or 4	Short lists are easier to remember
Use personal pronouns	Humanize the message with I/we statements
Respect people's fears and perceptions	Recognize emotions, avoid judgement and condescension
Give people options	Avoid paternalistic ways to inform decision-making
Avoid humor	Remember to be sensitive to people's emotions

The following worksheet can be used to develop messages using CERC framing.

Guiding questions	Your responses
What is your core message?	
How will you repeat your main message?	
What are your action steps?	
How will you respect people's fears and perceptions?	
What options are you giving your audience?	

2. Using debunking guidance

The Debunking Handbook 2020[6] and other debunking resources emphasize the importance of structuring messages in a strategic manner so as to refute false information. Figure D1 shows the components a message needs to have to successfully debunk and "unstick" misinformation. Experts also recommend appealing to scientific consensus, ensuring the corrected information is not more complex than the initial rumor, and providing a coherent alternative explanation for the rumor.[7]

FACT — Lead with the fact if it's clear, pithy, and sticky— make it simple, concrete, and plausible. It must "fit" with the story.

WARN ABOUT THE MYTH — Warn beforeheand that a myth is coming… mention it once only.

EXPLAIN FALLACY — Explain how the myth misleads.

FACT — Finish by reinforcing the fact—multiple times if possible. Make sure it provides an alternative casual explanation.
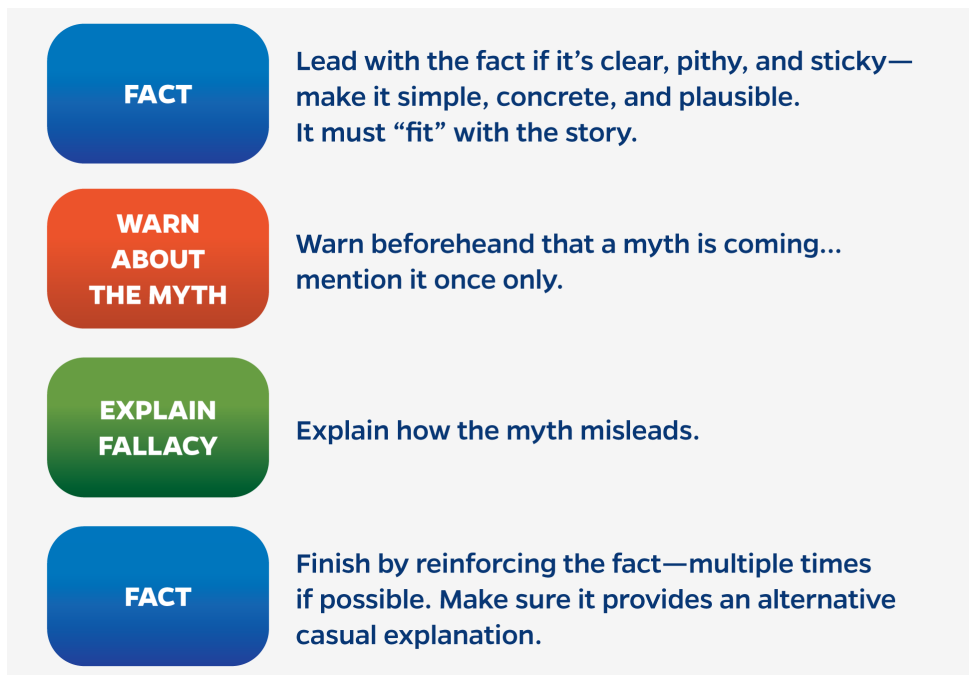
Figure D1. Structure of a message that debunks misinformation, adapted from *The Debunking Handbook 2020*[6]

The following worksheet can be used to develop messages using debunking framing.

Guiding questions	Your responses
What is your fact? State what is true first.	
How will you warn about the myth? Repeat the misinformation, only once, directly prior to the correction.	
How will you explain the fallacy? Ensure the rebuttal is clearly and saliently paired with the misinformation.	
What fact are you reinforcing at the end? Restate the fact again, so the fact is the last thing people process.	

3. Using the Truth Sandwich

The "Truth Sandwich" is a journalism technique that is similar to approaches used in debunking but focuses more on preventing the unintentional spread of additional false or misleading claims.[9] The basic structure of a Truth Sandwich is:

1. Start with the truth. The first frame gets the advantage.

2. Indicate the lie. Avoid amplifying the specific incorrect language if possible.

3. Return to the truth. Always repeat truths more than lies.

For example, the following Truth Sandwich script might be used during a natural disaster to address a rumor that individuals cannot use a disaster shelter unless they are US citizens:

Truth	We understand that there are concerns about shelter availability. We want to emphasize that any member of the public can use a disaster shelter.
Lie	No one will be turned away from a disaster shelter based on citizenship.
Truth	Disaster shelters are open to all members of the public.

The following worksheet can be used to develop messages using the Truth Sandwich framing.

Guiding questions	Your responses
What is the first truth you want to share?	
How will you indicate the lie?	
How will you repeat your truth statement?	

4. Using storytelling approaches

Storytelling allows audiences to understand cause-and-effect relationships, see patterns in important information, empathize with each other, and pay attention to the issue.[9] You can craft strategic stories using story maps like Figure D2 and incorporate good practice for writing compelling stories.[9,10]

IMPACT
- Share the impact
- Call to action

STATUS QUO & FIRST STEPS
- Introduce your protagonist
- Open eyes to the problem
- Diagnose the situation

Public Health Story Map

D A C B

BREAKTHROUGH
- Show cooperation in action

OBSTACLES & ALLIES
- Encounter obstacles
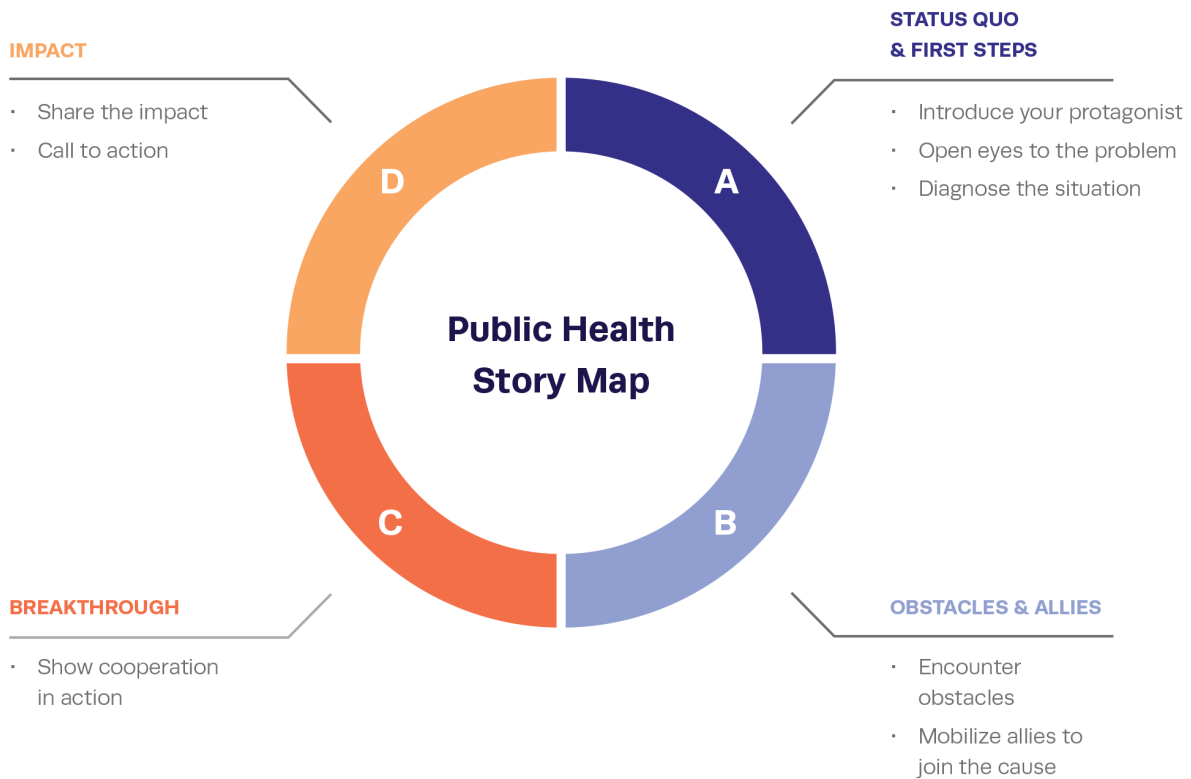- Mobilize allies to join the cause

Figure D2. A Public Health Story Map that helps structure stories around a narrative arc[9]

The following worksheet can be used to develop messages using a storytelling approach.

Guiding questions	Your responses
Clearly state a specific goal that you are working on.	
Who can help you achieve that goal?	
What do you hope your story will make them more aware of?	
What emotions do you hope your story will provoke?	
What actions should your story motivate them to take?	

5.   Outline for framing a social or scientific issue

FrameWorks provides suggestions on strategically ordering messages and building strong frames to help create better messages.[11] This way of framing messages discourages you from skipping over deeper explanations of a problem's origin. The technique asks communicators to lead with an aspirational principle, explain how an issue works, state the problem, and end with a proposed solution.

The following worksheet can be used to develop messages using this framing. On their website, FrameWorks shares examples of how this generic outline applies to the topic of childhood vaccinations.

Guiding questions	Your responses
Principle: Lead with an ideal that society should uphold. Tap into a collective concern—ideally, using a tested message that speaks to shared values.	
Process: Explain how the issue works. Establish a mechanism or process at play, using explanatory techniques like examples or metaphors.	
Problem: Put some tension in the plot. Make social conditions or structures the "bad guys." Paint these threats as important but not insurmountable.	
Proposal: Point to solutions. Highlight promising or proven collective approaches to addressing the problem.	

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11. FrameWorks. Order Matters. Published August 5, 2020. Accessed November 14, 2023. https://www.frameworksinstitute.org/article/order-matters/

Appendix E: Developing Messages Using LLMs

Large language models (LLMs) can help you come up with generic content as a starting point for a message[1] that can then be modified to better fit with the good practices suggested in this playbook and adjusted to maximize message engagement and effectiveness. **However, current LLMs are not a perfect solution for creating messages, do not incorporate the most up-to-date information, and sometimes hallucinate incorrect information.**[2] Below is an example of using Chat GPT-3.5 to generate the initial content for a message to address a hypothetical rumor that "the government started wildland fires in Hilton County in order to give occupied, low-income residential land to developers at cost."

We asked Chat GPT-3.5: *Please create a brief Facebook post that a local public health department should post after a wildfire in Hilton County to address a rumor that "the government started wildland fires in order to give occupied, low-income residential land to developers at cost."*

Chat GPT-3.5 generated the following message:

🔥 *Community Announcement: Addressing Rumors about Wildfires in Hilton County* 🔥

Dear Residents of Hilton County,

We understand that there have been concerning rumors circulating about the recent wildfires in our area. It's crucial to address these misconceptions. The notion that the government intentionally started these wildfires to allocate land to developers is entirely false and without merit.

Wildfires are natural disasters with multiple causes, often ignited by a variety of factors such as lightning strikes, human activity, or other unpredictable events. Our dedicated firefighters and emergency responders have been tirelessly working to contain and control these fires, prioritizing the safety and well-being of our community.

As your local public health department, we are committed to transparency and the truth. Our sole aim is to support and safeguard the health and welfare of all our residents. We are not involved in any land allocation or development schemes.

We urge everyone to rely on verified information from trusted sources. It's essential to refrain from spreading unverified claims, as they can cause unnecessary fear and confusion within our community.

For reliable updates and information regarding the wildfires and their impact, please stay tuned to our official announcements and verified sources.

Let's continue to support each other during this challenging time and work together to recover and rebuild our beloved Hilton County.

Sincerely,
[Your Local Public Health Department]

Chat GPT-3.5 used the following techniques to develop this message, which we learned by asking it "What framing, rhetoric, and communication techniques did you use to create that message?":

- **Clarity and Directness:** The message is clear and direct in addressing the specific rumor about the government starting wildfires for land allocation. It confronts the issue straightforwardly.

- **Empathy and Understanding:** The tone is empathetic towards the concerns and fears of the community members, acknowledging the seriousness of the situation and the impact of the rumors.

- **Authority and Credibility:** The message is conveyed on behalf of the local public health department, establishing authority as a trusted source of information. This adds credibility to the statement.

- **Factual Information:** It presents verified information about the nature of wildfires, acknowledging their various causes and emphasizing that the department is not involved in land allocation or development schemes.

- **Community Engagement:** Encourages community members to rely on verified sources and official announcements, emphasizing the importance of accurate information, and discouraging the spread of unverified claims.

- **Reassurance and Support:** Offers reassurance and support to the community, reaffirming the department's commitment to the health and welfare of the residents and advocating unity during a challenging time.

- **Call to Action:** Encourages the audience to stay tuned for updates through official channels, promoting an ongoing connection with the community and a source of reliable information.

The LLM successfully used several best practices and techniques mentioned in the playbook to generate a comprehensive message. Its call to action, method of reassuring the community, and emphasis on relying on verified sources of information are great ways to leverage risk communication practices. The list below details a few shortcomings of the message and how they could be addressed.

Shortcomings of the message	How it could be improved
The use of fire icons at the beginning can appear unserious and tone-deaf, given the gravity of the emergency.	Use a neutral alarm or megaphone icon to draw attention to the post or use no icon at all.
By debunking a sensational rumor directly and so shortly after the fire, the post may unintentionally amplify the rumor and make it spread faster.	Instead of refuting the rumor directly and risking amplifying misinformation, speak directly to what is known about the cause of the fire.
Listing potential unconfirmed sources of wildfires could push residents to jump to conclusions about other possible causes of this wildfire.	Remove any language that could promote conjecture around the cause of the wildfire unless a confirmed cause is known.

Shortcomings of the message	How it could be improved
Acknowledging the local public health department's lack of connection with land allocation, while honest, could instigate the opposite and motivate conspiracy thinking about their role in causing the fires.	Unless the public relations implications are more important than communicating information shortly after an emergency, prioritize turning the audience's attention to important information they need to navigate and recover from the crisis.
The message uses a cold, matter-of-fact tone and reserves empathy for only 1-2 statements.	Acutely after and during crises, people look to connect with their community. To promote community cohesion, the message should use an empathetic tone throughout and foster a sense of compassion, understanding, and togetherness.
The message did not use plain language.	Use plain language principles to make the message simpler.

You could improve the quality of this message by editing the initial prompt and follow-up requests to add more details, parameters, and conditions to shape the outputs, as well as review and manually modify the draft message by using information from this playbook or other health and/or risk communication guidance.

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Appendix F: List of Tools

The following table compiles the tools and resources that are hyperlinked throughout the playbook, in order of appearance.

Author(s)	Tool name	Subsection (if applicable)	Link
Johns Hopkins Center for Health Security	Appendix A: Checklist to Improve Trust		Tool included in appendix
World Health Organization (WHO), United Nations Children's Fund (UNICEF)	Infodemic Insights Report	Annex A7: Scaling up or scaling down infodemic insights, p. 44-46 Annex A7: Table, p. 44-46 3.2: Defining risk assessment criteria, p. 14-17	https://www.who.int/publications/i/item/9789240075658
World Health Organization (WHO)	WHO competency framework: Building a response workforce to manage infodemics		https://www.who.int/publications/i/item/9789240035287
FrameWorks	Must-Have Messenger Mindset		https://www.frameworksinstitute.org/toolkit/must-have-messenger-mindset-its-about-the-relationship/
Public Health Communications Collaborative (PHCC)	Plain Language for Public Health	Defining Your Audience and Goals, p.4 Step 3: Review and Testing, p.7-8	https://publichealthcollaborative.org/wp-content/uploads/2023/02/PHCC_Plain-Language-for-Public-Health.pdf
United Nations Children's Fund (UNICEF)	Vaccine Misinformation Management Field Guide: Information Ecosystem Assessment		https://vaccinemisinformation.guide/
Johns Hopkins Center for Health Security	Appendix B: Audience Persona Characterization Tool		Tool included in appendix
Google	Google Alerts		https://newsinitiative.withgoogle.com/resources/trainings/fundamentals/google-alerts-stay-in-the-know/
Talkwalker	Talkwalker		https://www.talkwalker.com/free-social-media-monitoring-analytics-tools

Author(s)	Tool name	Subsection (if applicable)	Link
Meltwater	Meltwater		https://www.meltwater.com/en
Sprout Social	Sprout Social		https://sproutsocial.com/
X	XPro (formerly TweetDeck)		https://pro.twitter.com/
Awario	Awario		https://awario.com/social-media-monitoring-tools/
MindTools	SMART Goals		https://www.mindtools.com/a4wo118/smart-goals
The Decision Lab	The OODA Loop		https://thedecisionlab.com/reference-guide/computer-science/the-ooda-loop
Sundelson AE, Jamison AM, Huhn N, et al.	4 i Framework for Advancing Communication and Trust (4 i FACT)		https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-023-16612-9
Lewandowsky S, Cook J, Lombardi D	The Debunking Handbook 2020		https://doi.org/10.17910/b7.1182
CARE USA	Using Social Media to Drive Public Health Outcomes		https://www.care.org/wp-content/uploads/2023/08/SBCC-Playbook.pdf
FrameWorks	Socia Media Message Templates		https://www.frameworksinstitute.org/toolkit/aapvaccine-social-media-messages/
Community Tool Box	Implementing Social Marketing		https://ctb.ku.edu/en/implement-social-marketing-effort
Smith Rogers L, Sharfstein J	Podcasting as a Tool for Crisis Communications		https://www.liebertpub.com/doi/abs/10.1089/hs.2023.0049?journal-Code=hs

Author(s)	Tool name	Subsection (if applicable)	Link
US Centers for Disease Control and Prevention (CDC)	Health Communication Playbook	Media Communications, p. 62-77 Identify Key Messages and Talking Points Worksheet, p.6,7 Use Design and Layout Effectively, p.17-26	https://stacks.cdc.gov/view/cdc/103379
FrameWorks	Order Matters		https://www.frameworksinstitute.org/article/order-matters/
Digital.gov	Federal Social Media Accessibility Toolkit		https://digital.gov/resources/federal-social-media-accessibility-toolkit-hackpad/
US Centers for Disease Control and Prevention (CDC)	How to Develop Products for Adults with Intellectual Developmental Disabilities and Extreme Low Literacy		https://www.cdc.gov/ccindex/pdf/idd-ell-product-development-tool-508.pdf
US Centers for Disease Control and Prevention (CDC)	Simply Put: A guide for creating easy-to-understand materials		https://www.cdc.gov/healthliteracy/pdf/Simply_Put.pdf
Association of State and Territorial Health Officials	COVID-19 Public Health Communications Resource Hub		https://www.astho.org/topic/infectious-disease/covid-19/communications-resource/
US Centers for Disease Control and Prevention (CDC)	Key Indicators of Scientific Influence		https://www.cdc.gov/os/impact/framework.html
National Cancer Institute (NCI)	Constructs and Measures for Health Behavior		https://cancercontrol.cancer.gov/brp/research/constructs

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