










How to talk about food risk?

A handbook for professionals



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1. Introduction

In Europe today, our food is arguably safer and more accessible than ever before. Despite this, there appears to be an increasing lack of public confidence in the food supply. A proactive approach to communicating about food would help to reassure the public about its safety, restore consumers' trust in the authorities charged with regulating it, and help people understand how to eat safely and healthily.

To reach these goals, a comprehensive strategy for food information communication must address a broad range of aspects.

- Government policies and controls put in place to ensure the safety of the food supply chain.
- Accurate, accessible and actionable information about healthy diets and lifestyles, to empower people to live healthily and prevent diet-related diseases.
- Safe food handling at home.
- Food science education in schools, to promote understanding of process technologies and innovation in food.
- Positive food industry initiatives.
- Food risk communication on hazards in the food supply chain.
- Crisis communication during urgent food safety incidents.

Achieving these objectives is not without challenges. Communicating about food is a complex activity that involves different actors, including scientists, government, industry, media, consumer groups, and the general public, each with their own aims and priorities. The evolution of the traditional communication landscape over the last 20 years, with more and more people receiving information online, has brought new challenges for food information communication. With

the internet and social media, communication is no longer a one-way flow of information from source to audience. It is now an interactive multidirectional conversation, where anyone can share information online. A multitude of sources combined with rapid content-sharing can lead to widespread misrepresentation or misinterpretation of information on food. The nature of social media also brings the challenge of accurately communicating complex scientific information in new formats such as images, videos or text with strict character limitations.

This handbook focuses on the two specific aspects of food information communication: food risk communication in general, and in crisis situations. Food risk communication is the process of informing audiences, frequently the general public, about food-related risk and safety issues, and providing sufficient information to allow them to take action to reduce or avoid risks.

In this context, it is important to remember that food is a highly personal and emotional topic, often closely linked to cultural beliefs and personal habits or identity. Furthermore, the perception of the magnitude of a specific risk can be amplified or reduced based on the audience's existing knowledge and opinions. Psychological, social and cultural aspects can affect the way that people receive risk information. For example, many people tend to accept risk information that reinforces their current beliefs or opinions, and distrust information that doesn't fit with their existing viewpoint. The so-called "risk-perception gap", whereby relatively small risks can provoke a high level of public concern or anxiety, or vice versa, is a common phenomenon. Therefore, communicators should remember to approach the topic of food risk with an appropriate level of sensitivity and empathy for their audience.

Although much of the information provided in this handbook is relevant for both general food risk communication and urgent communication during a food crisis, it is important to remember that the latter case may require different or additional actions. The European Food Safety Authority (EFSA) defines a food safety incident as urgent, if it meets two or more of the following criteria.

- The risk to public health is high (severe illness or death).
- The scale of the incident is large or likely to become so (high number of products, countries or people affected).
- The incident has occurred, or is believed to have occurred, as a result of an act of terrorism.
- There is a high actual or potential level of media interest or public concern.
- Vulnerable groups of the population, e.g. infants or the elderly, are or are likely to be disproportionately affected.
- The source of the problem is unknown.

Poor or ineffective risk communication can leave the public with insufficient or inaccurate information on which to base their food choices. It can lead to people feeling confused, angry or betrayed, losing trust in the communicator, or turning to non-credible information sources. In the worst case, the consequences of poor communication during a food crisis can be an increase in the number of people affected by potentially severe illness or adverse health effects.

While food risk and benefit communication cannot be made into an exact science, this handbook may serve as a condensed, introductory guide to the basics of the topic. It is intended to be used as a quick reference handbook and to complement more comprehensive documents on the topic of food safety and risk communication that have been issued by several international or governmental organizations. For more in depth information, readers are encouraged to consult [these documents](#).

2. How to use this guide

This handbook will guide the reader through a sequential step-by-step process for developing and implementing a proper risk communication strategy, including tasks that should be carried out during pre- and post-communication stages.

1 Evaluate your situation



Before communicating, it is important to decide whether, why, when, how and to whom risk communication should take place. Step 1 will guide you through a method for performing a systematic evaluation of the risk, the environment and a self-analysis of yourself as a communicator and equip you with the information needed for the next steps.

2 Know your audience



Information on food risks is not universal and not all audiences are alike. Step 2 outlines a set of questions that will aid in defining who will be affected by the risk and how they can best be reached.

3 Craft your communications



Step 3 focuses on developing key messages, tailoring the content and format of communications and choosing appropriate tools for reaching your audience.

4 Listen, evaluate, optimise



Monitoring the response to communications can provide valuable insights into the effectiveness of your communications.

Step 4 describes several methods for collecting feedback that can be used to refine or improve your communications.

5 Engage with others



Step 5 outlines some of the benefits of collaboration with other stakeholders that are concerned with the same topics and provides tips on how to maximise the effectiveness and impact of your communications through collaboration.

Crisis communication



For the purpose of this document, specific priorities to consider when communicating during food crises or urgent food safety incidents are highlighted at the end of the relevant chapters.

The handbook is supported by two case studies to illustrate real-life examples of successful and unsuccessful food risk communication. Finally, a series of four infographics are provided to highlight and explain common mistakes that are made in food risk communication.

3. Evaluate your situation

Communication on food risks and benefits cannot be made into an exact science. However, performing a thorough and systematic evaluation of the risk, the environment and a self-analysis of yourself as a communicator helps to achieve an objective understanding of the issue. An in-depth comprehension of the situation is crucial to developing an effective risk communication strategy.

The following sets of questions are intended to be used as a quick-start method for gathering information thereby providing an accurate overview of the situation. This analysis should take place before starting to communicate and should guide the communicator on if, why, when, how and to whom risk communication should take place.



1 Evaluate the risk

The first step is to gather the scientific facts about the risk, and how they may affect perception of the risk. Answering these questions will allow you to evaluate whether you have enough information about the risk to properly communicate about it.

What are the scientific facts about the risk?

At this stage, it is particularly important to distinguish between the terms hazard and risk. These terms are often incorrectly used as synonyms, which can cause misunderstanding of the magnitude of the risk to which people are exposed.

Is the risk natural or technological?

Broadly speaking people perceive risks from a natural hazard (e.g. natural food colours) as lower than risks from a technological or man-made source (e.g. synthetic food additives), despite the fact that in the world of food, those technological aspects are thoroughly evaluated by food safety authorities around the globe, before they can be applied.

Is the risk voluntary or involuntary?

In general, people are more willing to accept voluntary risks that they chose to undertake knowing the possible consequences (e.g. driving) than involuntary risks, over which they feel they have no control (e.g. flying as a passenger).

Who will be affected by the risk?

The number and type of individuals likely to be affected by a risk determines who you need to reach and can impact how a risk is perceived (e.g. when vulnerable groups such as children or babies are affected, the level of media coverage and public concern may be higher).

Is the risk highly sensitive?

Risk perception is influenced by people's memories of similar past events. Approach communication about new risks that may be compared to similar past technologies or products with caution to avoid invoking known misconceptions or inaccurate negative perceptions.

Is there a risk of social amplification?

An existing risk, which is of low concern to most people, can be magnified in the public eye by a specific event or simply by others communicating about the risk, in particular when misunderstandings or misinterpretations about the magnitude or probability of the risk are communicated to a wide audience.

2 Analyse the environment

The second step is to assess the social, political and media environment surrounding the risk and gain insight into how this may affect the public perception of the risk.

Is there a history of similar events?

The history of public perception and reaction to the same or similar past risks can allow you to anticipate the likely reaction to new information about the risk. Keep in mind that past risk events may have occurred before the proliferation of online and social media communication, which can affect the level of public interest or likelihood of social amplification. Therefore, the public reaction to information about current risks may differ from their reaction to similar past events.

What is the current level of public interest?

A high level of public interest can increase the perception of a risk that is unlikely to have a high impact on public health (eg. trace levels of pesticides on fruits and vegetables). Conversely public interest may be low for risks that are perceived as low-risk even though they have a high impact on public health (e.g. foodborne illness from microbial contamination).

Are there any current or ongoing political campaigns or debates related to the risk?

Political debate, government policies and campaigns on related topics can affect the level of awareness or interest as well as public opinion concerning the risk you wish to communicate about.

Are any stories related to the risk currently being reported in the media?

Linking to related stories that have a high level of media interest may help you to reach and engage a larger audience. Media trends can also provide insight into aspects related to the risk that are likely to be negatively perceived. Heightened media coverage of specific issues frequently coincides with publications of studies or opinions from governmental or international agencies (e.g. the World Health Organization, the

International Agency for Research on Cancer, the European Food Safety Authority and so on).

How does the culture influence the response of the audience to risk information?

Some cultures value an interactive style of communication with access to a wide range of information sources (e.g. helpdesks, online forums), while other cultures prefer one-way communication of factual, specific information from a recognised and trusted source (e.g. government, public institutions, and scientists). Some cultures tend to avoid uncertainty in risk information, preferring to receive precise information and details about the nature of the risk without any uncertainties. Others are more likely to accept that some level of uncertainty is inevitable. Keep in mind that you may be communicating to a single- or a multi-cultural population.

EU countries by their relative uncertainty avoidance:

Higher: Greece, Portugal, Belgium, Poland, France

Medium: Spain, Hungary, Italy, Austria, Germany, Finland, Switzerland, Netherlands, Norway

Lower: Ireland, UK, Sweden, Denmark

Do the facts about the risk contest consensual science?

Careful attention should be paid to the source of risk information that contradicts the current scientific consensus. Contradictory information can give the impression that experts do not understand the risk and this may cause worry or confusion within the general public.

3 Self-analysis in relation to the risk

The final step is to take a deeper look into your own motivation for communicating on a particular risk. This is vital for ensuring responsible dissemination of food risk information from appropriate sources.

Why are you communicating about this risk? Why now?

Motivations for communication (e.g. to promote public safety, raise awareness, increase newspaper readership, comply with regulation) and timing of communications can both affect how your messages are received.

Is it suitable to communicate about the risk now?

When deciding whether it is suitable to communicate about the risk, you should consider aspects such as whether the information has been peer-reviewed, whether the risk analysis is complete or whether a potentially increased risk is significant compared to the absolute risk.

Should you be communicating about this risk? Are you perceived as a high- or low- trust actor?

Generally, people have greater confidence in information that comes from familiar, recognised and reputable sources and are therefore more likely to value and act upon information from trusted sources. Currently, EU citizens are most confident in their doctors and other health professionals when it comes to information on food risks, followed by consumer organisations, scientists, environmental protection groups and national or European food safety agencies. The media, the internet, food manufacturers and retailers are less trusted sources of food risk information by EU citizens.

Who is your intended audience? What are their priorities in relation to the risk?

Getting to know your audience and understanding their information concerns, needs and feelings will be key to developing clear messages and choosing appropriate communication channels. For more, see Chapter 4.

4. Know your audience

Information on food risks is not universal and not all audiences are alike. Different food risks affect different people, depending on diet, lifestyle, socio-economic status and other factors. It is essential to know who will be affected by the risk to ensure they receive and understand the information. The better you know your audience, the better you can tailor your messages to their characteristics, concerns, feeling and needs, which will ultimately lead to more successful risk communication.

Whom do you want to reach?

First, determine which population groups are directly affected by the risk, bearing in mind that you may need to define multiple target audiences. Once you know who you need to reach, you can start gathering information on their characteristics.

- Socio-economic characteristics. *Age, gender, education level, income level?*
- Languages. *Is there more than one language group to address?*
- Existing beliefs or cultural attitude relating to the risk. *For example, cultures with high consumption of meat tend to actively avoid negative information regarding meat related risks.*

Examples of target audiences

- Men aged 18–25 years
- Women aged 25–60 years
- Children, toddlers, infants
- Elderly
- Care-givers for elderly/children
- People with a food allergy
- Vegetarians, vegans
- Farmers as primary producers

How much do they already know about the risk or related risks?

They may have existing beliefs that can support your information or common misconceptions that need to be challenged in order to get your message across. For example, many people assume that synthetic chemicals are more dangerous than natural ones and therefore that synthetic food additives may pose a greater health risk than natural ones. This perception may need to be overcome by explaining that the toxicity of a chemical does not depend on how it is produced and that all food additives, whether natural or synthetic, must go through a strict safety assessment before they can be used in food.

An overview of tools that can be used to gather this information is provided below.

Where do they go for information?

Understanding of the information-seeking behaviour of your audience will help you choose suitable communication tools with which to reach them.

- Do they actively seek out information on food risks? Are they more likely to find their information online? *Using Google, Wikipedia, YouTube, blogs or websites of well-known and trusted organisations.*
- Are they more inclined to absorb information passively through channels surrounding them in daily life? *Newspapers, television, social media, friends and family.*
- Can any third parties act as amplifiers for conveying your messages to a larger audience? *Doctors, dietitians, teachers.*

Tools for getting to know your audience

Information on how different groups of people engage with risk information is useful for making informed decisions on how, when and what to communicate. There are a range of tools that can be used to gather data about your audience and how they perceive food risk information including: focus

groups, interviews, online deliberation research, observational research, surveys, experiments, and social media research. Combining more than one method can deliver a more in-depth understanding of your audience.

For more comprehensive information benefits and limitations of each tool, please visit the [FoodRisc Resource Centre for food risk and benefit communication.](#)

During a food crisis

During a food crisis, getting the risk message communicated quickly to as many consumers as possible often takes priority over developing separate communication strategies for each audience. Brief messages with specific advice on how consumers can take action to lower their risk quickly may be necessary (e.g. avoiding certain foods or changing food preparation behaviours). If possible, make the message relevant to each specific group of people affected.

5. Craft your communications

The goal of food risk communication is to make sure your audiences are aware of and understand potential risks related to food and diets and to provide them with practical information for taking action, if necessary. This chapter focuses on developing the content of your communications to ensure that they are clear and actionable, and suitable for the communication tool you intend to use.

Prepare your key messages

Once you have a good understanding of the risk, the environment and the audience, you should have enough information to prepare some key messages. This is a set of no more than 3-4 main messages that summarise the essential information that you wish to convey. Your key messages will generally not be the final format of your communications, but simply a summary of the most important information to include in all further communications. They should address:

- **What is the issue/risk?**
Shortly summarise the details about the risk and the potential consequences, including who could be affected. Take your audience's level of knowledge into account as well as any common misconceptions that may need to be addressed (see [Chapter 4](#)).
- **How can people avoid or reduce the risk?**
Prepare clear, specific and actionable information on how people can avoid or reduce their risk. This helps to prevent feelings of anxiety, panic or loss of control among your audience.
- **What will be/is being done to prevent the risk re-occurring in the future?**
Describe safety measures that are being put in place by relevant stakeholders to reassure your audience that action

is being taken. For example, have food companies recalled or withdrawn unsafe products? Are new regulations or policies being introduced to prevent re-occurrence or reduce the risk?

- **Where can the audience get more information?**
Provide information on helpdesks, websites, online forums or other resources where your audience can obtain additional information.

Once your key messages are in place, you can use them to support development of communication materials in different formats to suit different channels, and language tailored to the audiences.

Choose your channels and develop appropriate communication materials

People seek out or passively receive information of food and risks in different ways (see [Chapter 4](#)) and not all audiences can be reached through the same channels. Ask yourself:

- Which outlets are most suitable for reaching your specific audience(s)?
- Do you need different channels for different audiences?
- Will you require channels for fielding and responding to enquiries?
- Will you have to package your information in different ways for different audiences?

While the key messages you wish to get across to your audience should be the same, the format of the communication materials will depend on the channels you choose to use to best reach the audiences. Eye-catching visual communications with limited text are useful for engaging users on social networking sites, while websites allow for sharing longer text articles with more comprehensive information and supporting visuals. For audiences that favour non-digital communications, television and radio are suitable for announcements of breaking news that require immediate action (for example in a food crisis). Topic-specific magazines (lifestyle, industry) reach audiences

that require immediate action (for example in a food crisis). Topic-specific magazines (lifestyle, industry) reach audiences with specific interests. A description of common communication tools and how to use them is provided below.

What is it?	Suitable for?	Limitations	Practical tips
<p>Media</p> <p>Television, radio, newspapers & online news</p>	<p>Breaking news on urgent public health issues with high public interest or impact</p> <p>Short news items</p> <p>Alerts of food crises and emergency risk situations (e.g. foodborne illness outbreaks)</p> <p>Reaching mass audiences, including those that do not consult information online</p>	<p>Not well suited to communicating about low-impact risks</p> <p>Can lead to social amplification or sensationalisation by association with topics that invoke large fears among the public (for example cancer)</p>	<p>Support television broadcasts with eye-catching visuals such as photos, graphs, infographics or videos</p> <p>Enhance credibility by including statements or interviews with experts</p> <p>Use print and online news to cover issues in more depth than television/ radio</p> <p>Support articles with simple visuals such as graphs or infographics</p> <p>Always prepare thoroughly for media interviews</p>
<p>Websites and digital publications</p> <p>A wide range of formats: newsletters, scientific opinions, expert interviews, FAQs, wikis...</p>	<p>Addressing all levels of risk (from low to high impact)</p> <p>Communicating about time-bound information (can be easily updated or expanded at low cost)</p> <p>Covering topics to the desired level of detail</p> <p>Reaching large audiences with varied interests</p>	<p>Generally not well suited for collecting feedback from the audience</p> <p>Can be a challenge when frequent updates are required, for example during a food crisis</p> <p>Older populations tend to have a lower degree of confidence in these sources, so additional channels may be needed to reach elderly</p>	<p>Include links where readers can easily access additional information from credible sources where relevant</p> <p>Incorporate links to social networking sites to promote widespread sharing of information</p> <p>Make sure to assign sufficient resources for checking and updating material as needed</p>

What is it?	Suitable for?	Limitations	Practical tips
<p>Printed publications</p> <p>Magazines, leaflets, brochures, factsheets, posters, booklets...</p>	<p>Raising awareness about long-term, well-studied issues that are unlikely to change over time</p> <p>Explaining what happened after a food crisis and informing on what is being done to avoid the same situation in future</p> <p>Reaching audiences with specific interests with tailored information</p> <p>Reaching audiences that do not use the internet</p>	<p>Audience may not be as wide as news media or as online publications</p> <p>Time and cost related to producing, printing and updating can be significant</p> <p>Not suitable for urgent communication during food crises</p>	<p>Target your communication to the specific interests of your audiences</p> <p>Identify suitable amplifiers to help distribute printed materials (e.g. health professionals to patients, teachers to students and so on)</p>
<p>Social networking sites and microblogs</p> <p>Facebook, LinkedIn</p> <p>Twitter</p>	<p>Posting short and simple messages that link to more detailed information</p> <p>Reaching large audiences in a short time (content can spread from user to user without direct contact with the information source)</p> <p>Raising awareness of specific topics</p> <p>Interacting with your audience, encouraging engagement and online discussions</p> <p>Gathering feedback through comments or replies</p>	<p>Some vulnerable population groups are not online</p> <p>Accurately addressing complex risk issues is a challenge due to the short, concise nature of social media posts.</p> <p>Character limitations may apply</p> <p>Lack of control over audience-sharing of your posts</p> <p>Less well suited for communicating about sensitive issues, or complex topics that can be easily misinterpreted or misunderstood</p>	<p>Post regularly and frequently during non-crisis times to grow a network of interested and engaged followers</p> <p>Include URLs to link to additional online resources, to help audiences to quickly access more in depth information</p> <p>Use interactive tools such as polls or votes to increase engagement</p> <p>Encourage audience engagement by sharing visually appealing posts that include images, graphics or photos or interactive tools such as polls or votes</p> <p>Tag key words using hashtags to allow users to easily search for information related to a specific topic</p>
<p>Audio-visual content-sharing platforms</p> <p>YouTube, Pinterest, Instagram, Flickr</p>	<p>Sharing non-textual content such as videos, images or podcasts</p> <p>Engaging large audiences of online users, subscribers or followers to a particular channel</p>		

What is it?	Suitable for?	Limitations	Practical tips
<p>Blogs</p> <p>Regularly updated websites, usually consisting of a series of posts or articles, posted in reverse-chronological order with a readers' commenting section</p>	<p>Expressing personal views, opinion pieces, or discussing topical issues or current trends that have a high level of public interest</p> <p>Gathering feedback through comments sections</p> <p>Gaining insight into how your messages have been understood</p> <p>Identifying areas of misunderstanding or misinterpretation</p> <p>Reaching audiences with specific interests and building a community of readers interested in similar topics</p>	<p>Significant time and resources may be needed to write and post new content regularly, respond to comments and keep readers engaged</p> <p>Blog archives remain easily accessible and relevance or accuracy of older content may change over time</p>	<p>Ensure that posts are clearly dated, particularly for information that changes over time</p> <p>Incorporate links to social networking sites to promote widespread sharing of information</p> <p>Support blog posts with simple, eye-catching visuals such as photographs, videos, graphs or infographics</p> <p>Link to credible sources of additional information where relevant</p>
<p>Messaging services</p> <p>SMS, MMS, WhatsApp, Skype</p>	<p>Sending short messages or urgent alerts to relevant audiences (e.g. to inform subscribers of the presence of allergens in mis-labelled products or of recalls of specific food products)</p>	<p>Audience is limited to mobile phone users</p> <p>Generally only suited for reaching subscribers to a specific alert system</p> <p>Character limitations may apply</p>	<p>Use multimedia messages (MMS) and other messaging services (e.g. WhatsApp and Skype) to send images, audio or visual files.</p>
<p>Mobile applications</p> <p>Software designed to run on smartphones and tablets</p>	<p>Providing tailored information to mobile device users with specific interests</p>	<p>Audience is limited to smartphone and tablet phone users</p> <p>Can be expensive to develop and many apps fail to reach high download rates</p> <p>Additional resources are required for maintenance and updates</p>	

A combination of channels can be more successful

- Microblogs, in particular Twitter, reach and engage a wide audience extremely quickly through the power of retweets and hashtags. However, content is limited to 140 characters. Incorporating shortened URLs into tweets allows users to link to additional information on websites or online news sites.
- Blog posts are used to engage in an interactive online discussion that may increase engagement and interest among readers, but can be supported with links to official or scientific sources to enhance credibility.

Tips for tailoring information to your audience

- Start with questions your specific audiences may want answers to. For example, consumers want to know about the nature of the risk, the severity and what they can do in case they are exposed. The food industry wants to know how the issue affects their operation and whether there will be any regulatory impacts, and so on.
- Choose your language carefully. For non-scientific audiences, use simple, clear language that is easy to understand. Avoid using scientific jargon or technical terms that may not be familiar to your audience.
- A picture is worth a thousand words. Visual aids such as simple diagrams or graphs can help illustrate complex concepts that are difficult to explain with text only.
- Use relevant examples to which your audience can relate to support your key messages. For example, for consumers it is much more useful to explain that it is safe to drink up to 5 cups of coffee per day compared to 400 mg of caffeine.

Test your communications

Depending on your planned communication timeframe, messages can be tested in face-to-face discussions, focus groups, or via surveys with representatives from your target

audience. During non-crisis times there will be more time for gathering this type of feedback, to help you assess whether your messages are well understood. Testing can also uncover any potential misunderstandings, to allow you to correct or adjust messages before communicating more widely.

Building trust

Trust between the information source and the audience is critical to succesful risk communication, and building a relationship with your audience takes time. However, once trust is established, it reinforces your reputation as a credible source of accurate food risk information that people will return to. It can also stop the public turning to unreliable sources that share misleading or innacurate information.

- **Be reliable**

The information you put out there is only as reliable as the facts on which it is based. Whenever possible, refer to the highest standard of scientific evidence to support your communications. [This infographic](#) explains the hierarchy of scientific evidence. Reliable sources of additional information, such as national and European food safety agencies or reputable scientists, helps to reinforce credibility and trust.

- **Be coherent**

To avoid causing confusion or panic among your audience, your key messages should always be consistent. While communciations can vary in format or level of detail, messages should be consistent, logical, coherent and free from contradiction. It is also important to ensure coherence with communications from credible third parties so that audiences receive consistent messages from various sources (For more on engaging with others, see [Chapter 7](#)).

Contradictory messages can result in confusion, panic or distrust, forcing the audience to choose which sources to believe based on personal judgement rather than scientific evidence.

- **Be timely (but address uncertainty)**

Timeliness is essential to effective risk communication, and sometimes you may need to communicate quickly about a risk that is still emerging, and where not all the necessary information is available yet (e.g. an outbreak of food-borne illness). Be transparent and acknowledge uncertainties related to the risk. Clearly explain what is known, what is not known, that more information may be forthcoming and what is being done to obtain this information. Failing to address uncertainties can also cause your audience to lose trust in you as a credible source of information on future risks.

As more information becomes available, use it to update your previous communications, in particular with implications of the new information and practical advice on how consumers should change (or not) their behaviour towards the concerned foods.

During a food crisis

During a food safety crisis or emergency, timely communication becomes a top priority. Failure to communicate rapidly may lead to an information vacuum. Insufficient information may cause your audience to turn to unreliable information sources or change their behaviour unnecessarily. During these situations, you may need to update your communications frequently as the event unfolds and more information becomes available. Past food crises (e.g. foodborne illness outbreaks) have shown that Twitter can be very useful for alerting large numbers of people to news of a crisis, and to refer to further information through links to external websites. Blogs are also popular during food crisis times, with some readers assigning a higher credibility to them than to traditional media sources.

Regular simulation exercises during peace times are useful for ensuring that adequate procedures are in place in the event of a sudden food crisis. Maintaining relationships with other relevant stakeholders during non-crisis times allows more efficient coordination on message coherence in emergency situations (for more see [Chapter 7](#)).

6. Listen, evaluate, optimise

Risk communication is a two-way process, which does not stop once your messages have been publicly disseminated. Monitoring both the direct response and the ongoing public discourse around the issue can provide valuable insights into the effectiveness of your communications and your audience's perceptions of the risk. In particular, this feedback will help you to see whether aspects of your communication need to be refined or altered.

How effective are your communications? Are the target audiences being reached?

If the information is not reaching the intended audience, it may be necessary to rethink the format of the communications or to consider different or additional channels.

Are their concerns being addressed or are new concerns emerging?

Your initial messages may be sufficient to address the concerns of your audience, but sometimes the priorities of the audience may change over time. It may be necessary to adapt your strategy to address new concerns. Comments and social media posts provide valuable qualitative information on the tone of the public discourse that can be used to optimise your communications.

Have you observed any unintended consequences resulting from your communications? Are your messages being misinterpreted?

Misinterpretations of your messages can spread rapidly through shares and retweets on social media and remain available online for a long time. It is critical to correct misunderstandings as quickly as possible.

The information gathered from your monitoring can help you identify, which aspects of your communications worked well and what could be improved in the future. It may become clear that some formats are far more successful at reaching your audience than others. Future communication campaigns could therefore focus on the successful formats to avoid wasting resources on developing materials that had a low impact.

Monitoring the public discourse can help you identify other people (e.g. journalists, bloggers) and organisations (e.g. food safety agencies, non-governmental organisations) that are engaged in discussions and content creation related to the same risk. This information can be used to build relationships with key communicators and to expand your network (see [Chapter 7](#)).

What to monitor and how?

Social media monitoring

There are hundreds of millions of people using social media to communicate and socialize and users are spending more and more time online. As a result, social media is playing an increasingly important role in shaping public debates and perceptions of food risk issues. Tracking key words and hashtags using social media monitoring tools can help to gather information on who is saying what about a specific topic, to identify concerns of the general public, and to detect inaccurate information shared online. There are many commercial social media monitoring tools but their functionality varies so they must be researched thoroughly before selecting the tool most appropriate to your needs. Important aspects to consider include:

- Which communication channel(s), geographical location, and languages are of interest?
- What is your timeline for monitoring - real-time or retrospective?
- Which aspect of the public discourse are you interested in? Content? Tone? Number of posts/shares?
- How easy is the tool to use? What type of technical support is provided?
- Budget and resource considerations - will you need additional staff time and/or training?

Media monitoring

Media monitoring consists of aggregation of media coverage (radio, television, print or online media) related to a specific topic or keyword(s). Monitoring media can help evaluate the impact of the communications by assessing how much media coverage your communications have attracted. This is particularly important if media channels were targeted as part of the communication strategy. It can be useful to examine content and tone of media coverage, and to check whether your communications were accurately represented. You may consider whether it would be useful to contact the journalist to correct any inaccuracies.

Website statistics

Analysing website statistics helps to evaluate the impact and popularity of communications published on websites or blogs. This includes monitoring how many visitors your posts are receiving, how many times your digital publications are downloaded, and the number of comments (if relevant). There are many tools available both paid and free (e.g. Google Analytics) and they too must be researched thoroughly before selecting the tool most appropriate to your needs.

Surveys

Regular surveys (web-based, by phone or in person) with members of your target audience can help you to evaluate whether your messages are easy to understand and how many people have taken action as a result. Surveys can also help you

to better understand your audiences concerns and needs and which channels they are most likely to consult for information on food risks in order to improve the effectiveness of your communications over time (see [Chapter 4](#) for more).

During a food crisis

When a food crisis is suspected, or beginning, media and social media monitoring should start as quickly as possible. Social media can spread news of food crises widely and very quickly. Examining what is being said at the very early stages can help to identify key concerns, so that communicators can be ready to respond quickly. Often, different communication channels are used at different stages throughout a crisis (e.g. Twitter at early stages, blogs and forums later on) and public sentiment can also change over time. Therefore, it is important to monitor volume (e.g. number of posts, mentions, followers, re-tweets), content (e.g. topic, sentiment and tone) and the networks of people involved in discussions and content creation throughout the crisis.

It is useful to track all media enquiries to ensure a timely response. If you decide to respond to individual questions on social media, ensure you have adequate resources to manage the task. If needed, use links to direct social media users to additional information. When responding directly to an inaccurate claim on social media, use the same hashtag as the original post to ensure a wider reach.

7. Engage with others

Food risk communication is a complex process, and often multiple actors have an interest in a specific risk and how information is communicated. The main communicators on food risks include scientists, journalists, bloggers, food companies, industry or consumer organisations, governments or public health authorities. Establishing a routine collaboration and ongoing two-way dialogue with other stakeholders helps to maximize the effectiveness and impact of your communications in a variety of ways. Some of the benefits include:

- A better understanding of the perception of risk from different perspectives and a more complete knowledge of the aspects of the external environment that may affect the perception.
- The opportunity to gather more feedback on potential concerns of your target audience or to identify concerns or unintended consequences of your communications that you may not have been aware of.
- The potential to generate greater support for effective communication by increasing interest among relevant partners.
- Enhanced reach and impact for your communications when shared through other stakeholders' networks and communication channels.
- Avoiding potential conflicting or incoherent messages reaching the audiences.
- Higher public trust and a greater willingness among the public to accept the messages and take action.

Developing good working relationships with relevant stakeholders over the long term is key to effective collaboration or consultation on food risk topics. It is particularly vital to have prior established relationships and procedures for interacting with stakeholders, when reacting to unexpected or sudden food scares or crises in a timely way. However, keep in mind that

engaging with stakeholders on food risks may be inappropriate in situations where you do not wish to consider their position or contribution in your final communication materials.

Tips for establishing and maintaining relationships

- Maintain lists of organisations and individual contacts that have an interest in the risk topics you communicate so that the concerned person can be directly reached.
- Share information regularly, both in “peace” and crisis times to ensure others are aware of your communication activities.
- Meet with relevant stakeholders to share information on audiences, gather feedback on communication goals and strategies, and potential partnerships.
- After an incident, review your procedures for collaborating with other stakeholders to see what went well, and what could be improved.

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9. Annexes:

Case studies & infographics

Case study 1 – Cancer Research UK response to IARC evaluation of the carcinogenicity of red and processed meat

On 26 October 2015, the World Health Organization's (WHO) International Agency for Research on Cancer (IARC) published a [press release](#) summarising the conclusions of their evaluation of the carcinogenicity of the consumption of red meat and processed meat. IARC classified the consumption of processed meat as carcinogenic to humans (Group 1).

The IARC announcement triggered a large amount of media coverage, including many misinterpretations and inaccuracies:

“Processed meats rank alongside smoking as cancer causes – WHO”

- [The Guardian](#)

“The World Health Organization (WHO) is set to issue a warning about the cancer risks posed by processed meats, which were found to be as harmful as cigarettes”

- [Tech Times](#)

“Officials said just 50 g of processed meat a day – less than one sausage – increases the risk of bowel cancer by almost a fifth”

- [The Daily Mail](#)

Faced with this large media hype, Cancer Research UK reacted the same day on its blog, providing further context and advising the public on how to accurately interpret IARC's conclusions.

What Cancer Research UK did right

- Reacted in a timely way – their blog was published the same day as the IARC press release.
- Used simple language and clearly explained any technical terms.
- Supported their explanations with quotes from experts on their blog: *“As Professor Phillips [Kings College London] explains: IARC does ‘hazard identification’, not ‘risk assessment’. That sounds quite technical, but what it means is that IARC isn’t in the business of telling us how potent something is in causing cancer – only whether it does so or not.”*
- Clearly distinguished hazard and risk when explaining how the IARC classification process works.
- Put relative risk increases into context by including data on absolute risk. The relative risk increase was translated to absolute numbers to explain how eating processed meat or not affects the number of cases of bowel cancer in the UK population on their blog: *“«We know that, out of every 1,000 people in the UK, about 61 will develop bowel cancer at some point in their lives. Those who eat the lowest amount of processed meat are likely to have a lower lifetime risk than the rest of the population (about 56 cases per 1,000 low meat-eaters). If this is correct, the [...] analysis [by World Cancer Research Fund] suggests that, among 1,000 people, who eat the most processed meat, you’d expect 66 to develop bowel cancer at some point in their lives – 10 more than the group, who eat the least processed meat. ».”*
- Supported practical advice on recommended portion sizes and how to reduce consumption of processed meat with examples familiar to their target audience: the UK general public.

- Included visually-appealing downloadable infographics with a call to action to share further on social media:



Sources

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Case study 2 – Communication around the 2011 *Escherichia coli* outbreak in Germany

In 2011, enterohaemorrhagic *Escherichia coli* (EHEC) caused a serious outbreak of foodborne illness with cases recorded first in Germany and later in France. EHEC is a bacterium that exists in multiple strains; some strains are harmless, while others can cause severe to fatal food poisoning in humans. Overall, almost 4,000 people fell ill and 53 people died from EHEC infection during this outbreak.

Early May:

Reports of first cases of EHEC infection emerge in Germany. A very rare *E. coli* strain (O104:H4) is detected in a number of patients and identified as the likely cause of the outbreak. Raw salad ingredients (lettuce, tomatoes, cucumbers) are the suspected source of the infections, based on information on what foods people have eaten.

26 May:

A press release from the Hamburg Institute for Hygiene and Environment (a German state-level government laboratory) announces that EHEC has been detected in Spanish cucumbers.

26-30 May:

German media reports that Spanish cucumbers were the source of the outbreak:

“Scientists at Hamburg’s Institute for Hygiene and Environment have found the deadly *E. coli* bacteria causing the outbreak in northern Germany”

- Spiegel Online International

“Deadly *E. coli* found in Spanish cucumbers”

- The Local

1 June:

Federal Institute for Risk Assessment (BfR) confirms in a press release that while EHEC had been detected in Spanish

cucumbers, it did not match the O104:H4 strain causing the outbreak.

 25 June

Reports from France link the consumption of raw sprouted seeds with cases of EHEC infection with the O104:H4 strain. Fenugreek seeds from Egypt are identified as the common food source of the French and German incidents and therefore the probable source of the outbreak.

 26 July

The Robert Koch Institute declares the outbreak officially over.

What happened?

The Hamburg Institute press release announced that EHEC had been detected in Spanish cucumbers. However, the language used did not express clearly enough that the strain of EHEC detected in Spanish cucumbers had not yet been matched with the O104:H4 strain that caused the outbreak. Therefore, the source could not yet be confirmed. The level of uncertainty was misinterpreted, and many German media stated with confidence that the Spanish cucumbers were the source of the outbreak. Over the following days, the Hamburg Institute failed to issue a statement correcting the misinterpretations and inaccuracies in the media reporting. The inaccurate information spread rapidly through the traditional and social media, reaching large audiences.

Five days later, the BfR confirmed that the strains of EHEC in Spanish cucumbers did not match the strain found in the patients and so they were not the source of the outbreak. As a result, for five days, the public believed that Spanish cucumbers were the source of the outbreak, causing an unnecessarily large negative impact on the Spanish cucumber industry and creating a false stigma around these products. In addition, consumers were not adequately warned of other potential sources of the outbreak that had not definitively been ruled out.

Seemingly conflicting messages emerging over time may ultimately have contributed to a loss of trust in the

communicating institutions. This could have impacted future communications around food borne illness outbreaks.

What could have been done differently

- The key message was not communicated clearly enough in the original press release: the difference between preliminary screening results and confirmed results was not made clear and this led to widespread misinformation. The remaining uncertainty could have been emphasised by stating that while EHEC had been detected in Spanish cucumbers, there had not yet been time to identify the strain or confirm it matched the O104:H4 strain.
- It was important to reassure the public by explaining that official laboratories were working on identifying the strain and give an indication of the time frame within which the results could be expected.
- Media and social media monitoring could have allowed the Hamburg Institute to rapidly discover that the level of uncertainty had been misinterpreted.
- Quickly issuing a follow-up statement to correct the misinterpretation and explaining more clearly that Spanish cucumbers were suspected, but not yet confirmed as the outbreak source, could have helped to avoid further propagation of the inaccurate message.
- Better coordination between the Hamburg Institute and the BfR may have helped to ensure coherence of messages reaching the public from different sources.

Sources

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Press Release (2011) Federal Institute for Risk Assessment (BfR).

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Infographic 1: Hazard and risk



Infographic 2: Relative and absolute risk

Absolute risk

is the likelihood of a health effect occurring under specific conditions

for instance, the chance of a person developing heart disease is **based on factors** such as:



age



physical activity



sex



genetics



diet

commonly expressed as:



a 1 in 10 chance
of developing heart disease

a 10% chance
of developing heart disease

Relative risk

is the likelihood of an event occurring in a group of people compared to another group with different behaviours, physical conditions or environments

VS

meat eater



vegetarian

inactive



physically active people

overweight



normal body weight

low income



high income



for instance expressed as:
processed meat consumption
increases risk of bowel cancer
by 18%

Relative risks alone do not tell the full story...

If **absolute** risk is 2 in 10...



50% increase

...risk increases to 3 in 10



If **absolute** risk is 4 in 10...



50% increase

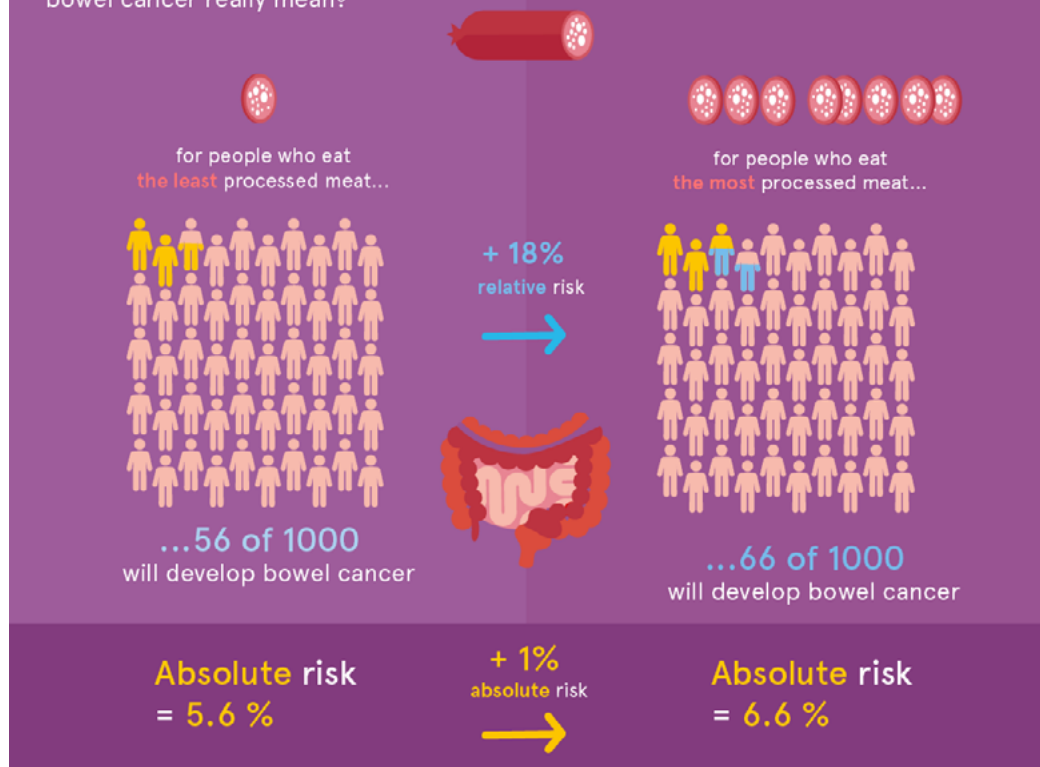
...risk increases to 6 in 10



Absolute risk numbers are needed to understand relative risks!

Example: processed meat and bowel cancer

What does a 18% increased risk of bowel cancer really mean?



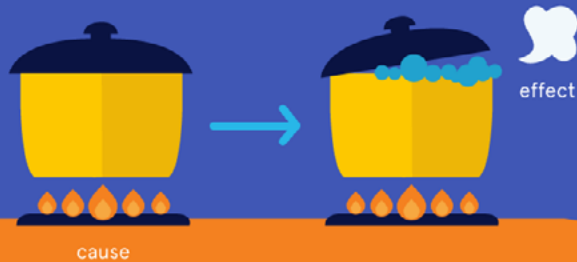
Infographic 3: Correlation and causation

Correlation vs. causation



Causation

when one thing (a cause) triggers another thing to happen (an effect)

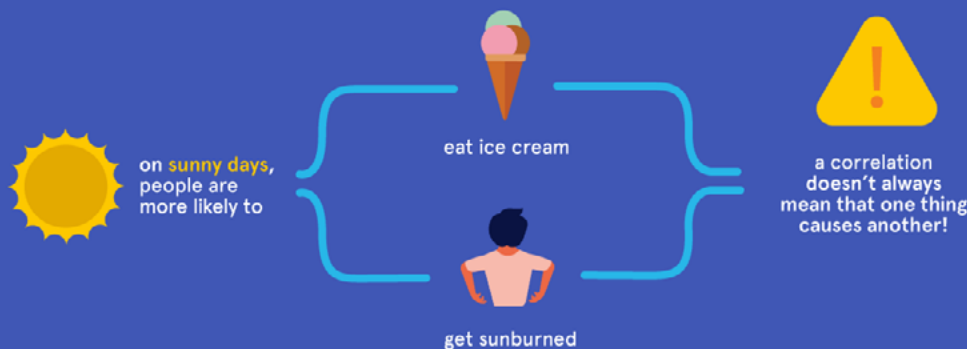


Correlation (association)

when two or more things appear to be related



Correlation doesn't always mean causation!



Infographic 4: Hierarchy of scientific evidence

