



Zika virus infection: step by step guide on Risk Communications and Community Engagement

This document offers suggested risk communication actions in relation to Zika virus infection and other health issues linked to this disease. It is directed toward ministers of health and other health sector actors who, with their national (multi-disciplinary) teams for communication and social mobilization, will be able to adapt the provided information to the needs of their countries and audiences.

Communication objectives

- To communicate timely, accurate information on Zika virus, addressing public health concerns, and providing information that the population needs regarding possible health issues related to this disease.
- **To continue encouraging changes in individual behavior and community participation, in order to control the vector and its breeding sites.**
- To keep the public informed on the risk, and to explain what is known and what efforts are being undertaken to identify what is *not* known about the virus and its impact on the health of specific population groups.
- To maintain credibility and public trust by disseminating accurate science-based material.
- To create a monitoring system to identify speculation and conjecture, dissipate rumors, and correct inaccurate information and erroneous ideas as quickly as possible.
- To respond rapidly to concerns and specific needs for information on the part of the public, health care providers, and the public health community.
- To adopt a unified and consistent governmental approach to strategic and operational communication. To include partners and allies in the non-governmental sectors (non-governmental organizations, private sector entities, community groups).
- To create a system capable of ensuring consistency in the messages issued by representatives of the national government, health services, and local health authorities.
- To share information on the first occurrence of the disease with affected local and international counterparts, so as to maximize public awareness and ensure the interinstitutional consistency of messages on Zika virus.

Basic hypotheses

- **No mosquito, no disease. Reducing the presence of the *Aedes* mosquito, eliminating its breeding places, avoiding bites, and improving environmental conditions in and around dwellings continue to be the fundamental tools in the fight to reduce the risk of Zika virus transmission.**

Hypotheses on the association with microcephaly

- If there is an increase in cases of microcephaly in other countries of the Americas, the news and social media may be the first to announce this, before official announcements have taken place. The first case to come to light may generate alarm among pregnant women, and doctors will have to respond to the concerns.
- There will be a time lapse between reports of the first presumed case and the first confirmed case. The longer this period, the more speculation will occur in the media and among the public.
- When a case is confirmed, it should be announced to the public promptly.
- There will be a great demand for information from the public and from the national and international media.
- Social media will exponentially increase the pressure and demand for information. In addition, social media enormously increase the potential for inaccurate information and for the rapid spread of rumors.
- Incomplete and incorrect information, rumors, and mistaken ideas among the population will emerge, and people may adopt measures based on such information.
- There will be immediate, extensive, and constant demands for information from health authorities, partners, the media, regulatory entities, the general public, and other groups. This will exert pressure on government to present the facts quickly. Health workers, and in particular those working with pregnant women, will also face demands for immediate information.
- Public health guidance and recommendations may change as more is learned about the cases of microcephaly and their possible relation to the appearance of Zika virus. However, the public and other directly affected stakeholders should be kept informed of new recommendations as soon as they are made.

Key message guide

Public messages should be timely, precise, applicable, and relevant, i.e., tailored to the audience for which they are intended.

Communication products should be tested to analyze the public impact of their messages, and to ascertain whether behavioral changes to control the vector have in fact been achieved.

Below is a list of specific questions that may arise regarding Zika virus infection and other health problems likely to be related to it.

- What is Zika?
- What are the symptoms?
- How is it different from dengue and chikungunya?
- What should I do if I have symptoms of the disease?
- Who is in charge, and what are they doing to investigate and control the situation?
- What are health authorities doing to address the situation? Ministries of health? Border control authorities?
- To what extent should the general public, and pregnant women in particular, be worried?
- How can I protect myself and my family from being infected by Zika virus? What is the risk for the community?
- Can the disease be fatal? When should I see a doctor? How is it diagnosed?
- Are there antiviral or other treatments? Is there a vaccine? Can the infection be transmitted by blood or sexual contact? Can it be transmitted from mother to child?
- How does Zika virus affect pregnant women and fetuses? What are the recommendations for pregnant women in areas where Zika virus is present?
- Can one travel to a country where Zika is present?
- What is recommended for women of reproductive age in regard to future pregnancies in areas where the virus is present?
- Can a mother transmit Zika virus to her baby during pregnancy or birth?
- What is congenital microcephaly? Can Zika produce congenital malformations such as microcephaly? How is microcephaly in a baby confirmed?^[1]
- Can Zika produce Guillain-Barré syndrome?

CONTROL AND ELIMINATION OF THE VECTOR AS A PRINCIPAL STRATEGY

Reducing mosquito populations, eliminating breeding sites, and avoiding bites continue to be the most important ways of preventing and controlling Zika infection. Among other actions to eliminate the vector, strategies should include intersectoral activities to eliminate standing water and to provide and conserve safe water.

The key messages to the population should speak to individual and community action, changes in behavior needed to eliminate and control the mosquito, and avoidance of mosquito bites.

NO MOSQUITO, NO ZIKA

Human beings are infected by Zika virus through the bites of infected mosquitoes. When a mosquito feeds on the blood of an infected person and then bites other people, Zika virus that can cause the disease is transmitted.

Prevention requires knowing about the behavior of the mosquito and how it breeds, as well as being aware of individual environmental responsibility for combating the mosquito.

UNDERSTANDING THE MOSQUITO

- The *Aedes* mosquito transmits Zika virus. It lives inside and around houses, and reproduces in any object containing still water.
- The incubation of the mosquito requires 7 to 10 days, and once born the insect can live up to 6 weeks.
- *Aedes* mosquitoes lay their eggs every 3 or 4 days. A female may lay as many as 400 eggs over her lifetime. The eggs can resist drought conditions for over a year, and then evolve into mosquitoes when in contact with water.
- The times of day when the mosquito is most active and the risk of bites greatest are early morning and dusk.

TO CONTROL AND ELIMINATE THE MOSQUITO, WE ALL NEED TO DO OUR PART

- All members of society (officials, the public sector, the private sector, NGOs, families, and individuals—not only the public sector or health sector) must share the responsibility for vigilance to control the mosquito's breeding sites in both public places (such as streams, cemeteries, empty lots, markets, etc.) and private places (e.g., in and around homes).

ELIMINATING BREEDING SITES (LARVAE AND EGGS)

- The *Aedes* mosquito prefers to lay its eggs where water accumulates (primarily basins, crocks, tubs, or other large containers, and tires) in and around houses, schools, and workplaces. Therefore, it is important for everyone to participate.
- *Caring for the immediate surroundings of dwellings, and being aware of objects that can accumulate water, are keys to eliminating the breeding of new mosquitoes.*

The following steps are recommended to eliminate the mosquito's breeding sites:

- Avoid keeping water in containers outdoors (flowerpots, bottles, and containers that can accumulate water) so that they do not become breeding sites for mosquitoes.
- Cover water tanks or deposits hermetically, or treat them with chemical products (such as lye) or biological products (such as fish that eat the larvae).
- Do not allow open refuse to accumulate; put it in closed plastic bags and keep the bags in closed containers.
- Open drains where water could stagnate.
- Using screens or mosquito netting on windows and doors can also help reduce contact with the mosquito.
- Properly scrub the sides of basins and crocks to destroy eggs adhering to the walls of these receptacles, since the eggs develop when they come in contact with water.
- Keep gardens and yards free of weeds.

- Keep containers that are not being used face-down.

INDIVIDUAL PROTECTIVE MEASURES

- As protection from being bitten, the following measures are recommended for people living in areas where cases have appeared, as well as for travelers and, especially, for pregnant women:
 - Cover exposed skin with long-sleeved shirts, pants, and hats.
 - Use repellents recommended by health authorities, and apply as indicated on the labels.
 - Sleep in places protected with mosquito netting.
 - Use repellents and apply them frequently to exposed skin or clothes. Pregnant women can use repellents as long as they follow the instructions on the product's labeling.
 - Use mosquito coils and insecticides in vaporizers.
 - To minimize contact between mosquitoes and patients infected with dengue, chikungunya, or Zika, people who are ill and suspected of having one of these diseases should be protected by mosquito netting while sleeping or at rest.

USING INSECTICIDES TO ELIMINATE POPULATIONS OF ADULT MOSQUITOES

- Spraying insecticides to eliminate mosquito populations is necessary when transmission is taking place, but is not in itself sufficient, since breeding sites must also be eliminated.
- Given the times of day when the mosquito is most active, it is best for public control measures around houses to be taken around dawn and dusk. Accordingly, it is essential that people and families be advised on a previous day of the action and schedule for their neighborhood, so that they can have their doors and windows open, allowing the insecticide to enter the dwelling.
- When health professionals or others apply insecticides inside dwellings, cooking utensils, food, and water for human or animal consumption must be well covered or stored in closed places.
- When an insecticide is applied inside a dwelling by health professionals or others, people must leave the dwelling and keep the house closed for at least 20 minutes after the spraying to ensure that the mosquitoes are killed.

Guiding principles of risk communication

- When health risks are uncertain—it is uncertain, for example, whether Zika can cause Guillain-Barré syndrome or microcephaly—the population needs information on what is known and what is not; the actions being taken by the responsible authorities to answer the pending questions; the real extent of risk; and provisional guidelines for decisions on protecting their health and the health of others. Insofar as possible, disseminating this

information before actual cases are diagnosed will help mitigate initial concerns.

- The timely and transparent dissemination of accurate and accessible science-based information on Zika virus infection creates public trust, in particular because the effects of this disease, which is new to the Region and was previously more limited in its geographic and demographic scope, are still unknown. It is important to make use of all possible channels to bring unified messages to the population (social media, institutional websites, community leaders, mass media, target audiences of partners and allies, etc.).
- Coordinating all of the organizations and health workers involved in creating and disseminating messages is fundamental in attempting to forestall confusion. Confusion can undermine public trust, create fear and anxiety, and slow down response measures.
- Prioritize the messages. Messages should be organized in order of importance, focusing on those messages that have the greatest impact in terms of containing the event and affecting behavior in the population.
- Information for the public should be accessible, technically correct but adapted to the different audiences, and sufficiently thorough to promote support for official policies and measures such as those designed to control and eliminate the mosquitoes and their breeding places. The messages should be translated into other languages or dialects as necessary.
- Make preparations for social mobilization and effective community participation in activities designed to eliminate breeding sites and control the mosquito.
- The information presented should leave as little room as possible for speculation, and should avoid over-interpretation of the data, as well as overly confident evaluations of public health investigation and control measures.
- It will be important to realize that approaches and recommendations may change as more is learned about this disease.
- Make contingency plans: establish mechanisms and actions to address possible situations involving socially sensitive actions.
- Changes of behavior will be based on education, leading to changes in environmental habits and approaches to caring for houses and their surroundings. Schools and community leaders are key elements in bringing about these changes.
- Keep journalists constantly informed of how the situation is evolving. Provide for extensive appearances of skilled spokespeople who can provide unified information. Take measures to ensure the accuracy of data, so as to avoid giving information that is, or can be perceived as, contradictory.

Evaluating the perception of risk (examples)

To achieve effective prevention and control activities that actively involve individuals and communities, one tool is to analyze the perceptions of different audiences regarding Zika virus infection, possible related health problems, and the mosquito's role in transmitting the virus.

Individuals' risk perceptions are based on their perception of susceptibility/non-susceptibility to acquiring the disease, its severity or the magnitude of the problems it brings, the benefits of changing their behavior versus the personal costs, and their willingness make the changes.

National and local authorities should analyze the risk perceptions associated with the disease and the mosquito, so as to carry out appropriate communication activities:

Indicate the following problems in terms of the risks they entail:

	VERY HIGH risk	HIGH risk	MODERATE risk	LOW risk
Dengue				
Why?				
Chikungunya				
Why?				
Zika				
Why?				
Microcephaly				
Why?				

Dimension	Zika	Aedes mosquito
Familiarity	Is this a risk you are familiar with?	Is this a risk you are familiar with?
Uncertainty	Can you predict whether you are going to get Zika in the next five years? (It doesn't matter whether you think you will or won't; the question is whether you can predict.)	Can you predict whether you are going to get a disease from a mosquito bite in the next five years? (It doesn't matter whether you think you will or won't get sick; the question is whether you can predict.)
Control	Can I take personal control measures to reduce the risk of getting Zika?	Can I take measures personally to reduce the mosquito populations?
Benefits	Does getting Zika have any benefits?	Does controlling the mosquitoes and their breeding places have any benefits?

Fear	Are you afraid of getting Zika ? Are you afraid that you or a family member will become pregnant and have Zika ?	Are you afraid of getting sick as the result of a mosquito bite ?
Mistrust	Are there institutions taking responsibility for doing things to prevent the risk of Zika ?	Are there institutions taking responsibility for doing things to prevent and control breeding sites and mosquito populations ?
Reversibility	Is it possible to recover from Zika ?	Is it possible to recover from the diseases caused by mosquito bites ?
Personal interest	Have you felt that you or your immediate family are at risk for getting dengue ?	Have you felt that you or your immediate family are at risk for getting chikungunya ?
Ethical and moral aspect	Do you think that people who get Zika engage in some type of risky behavior?	Do you think that people who are bitten by mosquitoes engage in some type of risky behavior?
Known victims	Have you had Zika ?	
Catastrophes	Do you think there is a risk of a Zika “epidemic” in our country?	Do you think there is a risk of an “epidemic” of diseases transmitted by mosquitoes in our country?*
Other		

*These questions can easily be modified to explore perceptions of microcephaly risk if a country’s situation requires it.

This survey should incorporate questions on attitudes and practices:

What behavior do you need to change to control mosquitoes and their breeding places?

Why aren't you behaving that way now?

How can you influence these behaviors and better support them?

What obstacles are there?

Why are some people making these changes now, and others not?

How is change achieved?

What do health care workers and residents think about the effectiveness of the control measures taken so far?

Who are presently, or potentially, the most important actors in household hygiene? Who influences them?

Who does the community trust as a source of information?

What are the best media for transmitting the information?

What terminology and concepts about the disease, the mosquitoes, and hygiene should they use?

Main channels of communication (examples)

The Ministry of Health will use a variety of channels to distribute information and messages to the media and the public about how public health entities and doctors are responding to the situation, non-pharmaceutical interventions, and any other general or educational information relating to the various organizations participating in the response. The key channels of communication include, but are not limited to:

- Information sessions for the media, including televised press conferences and telephone conferences with journalists.
- Social media (such as Twitter, Facebook, YouTube, Instagram, Twitter podcasts, texting, etc.).
- Micro websites with detailed information on Zika virus infection.
- Public service announcements on the radio.
- Distribution of printed materials.
- Other actions for social and community mobilization. Other partners and allies (churches and parishes, community government assemblies, sports events, popular personalities, etc.).

If cases of microcephaly are detected among newborns, and correlation with Zika is proven, health authorities should:

- Collaborate closely with public health authorities and other local authorities (such as hospital employees) to evaluate the situation and prepare for the public announcement.

- Use a single spokesperson and send unified messages. Provide the media interviews with public health officials who are thoroughly familiar with the subject and prepared to address the media.
- Notify the news media, sending the notification to the entire list of media outlets.
- Issue a statement for the media.
- Simultaneously send text messages and tweets in real time to inform the public (if possible).
- Issue a note describing key data, preparations for government response, and social protection measures.
- Update the health website with essential public health information (if there is good internet access).
- Update questions and answers for the emergency telephone line (if there is one). Make sure that the emergency telephone line has been provided with all of the material distributed to the media.
- Update the international partners that are providing technical cooperation. Provide frequent updates to providers of care to pregnant women, so that they can judge how to respond to their clients' concerns.

Audiences

Health officials will disseminate information extensively to the general public, to health workers, and to the public health community, to inform them regarding Zika virus infection and to address the concerns of the general public.

Some specific audiences are described below. All of these groups have concerns and problems, some shared, others differing, which require specially targeted communications efforts in order to maintain trust and manage the expectations of the target audiences.

General public	<ul style="list-style-type: none"> • People living in areas where there is a risk of infection • Pregnant women and women of reproductive age • Patients and persons with symptoms
Health workers	<ul style="list-style-type: none"> • Doctors and other health workers • Associations of medical professionals • Laboratory personnel
Travelers and the tourism industry	<ul style="list-style-type: none"> • Travelers to areas where there is a risk of infection • Airline companies • Professional airline organizations • Cruise lines
Community organizations	<ul style="list-style-type: none"> • Schools • Religious organizations • Businesses • Civic organizations

CHANNELS, ACCORDING TO AUDIENCE (examples)

Channel	Insert types of audience the channel reaches
Social media	<ul style="list-style-type: none"> • Public
Websites	<ul style="list-style-type: none"> • Public • Health workers
News media	<ul style="list-style-type: none"> • Public
Doctors' and nurses' organizations and networks	<ul style="list-style-type: none"> • Health workers • Public health community
National emergency telephone line	<ul style="list-style-type: none"> • Public
Partners The partners that may be part of the communication initiatives and who should receive up-to-date information and be apprised of key points, so that their members are prepared to respond to questions from the public.	<ul style="list-style-type: none"> • Health workers • Public health community • General public • Travelers • NGOs and organizations providing social protection for vulnerable populations
Community centers	<ul style="list-style-type: none"> • Public • Community dispensaries • Schools • Other
Other: Points of entry Workplaces (factories, <i>maquilas</i>, unions, schools, health care facilities, prisons, etc.)	<ul style="list-style-type: none"> •

MEDIA SPOKESPEOPLE

The principal media spokespeople are:

- 1.
- 2.
- 3.
- 4.

Examples of IMMEDIATE ACTIVITIES

Timing	Activities
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Hour 1	<ul style="list-style-type: none"> • Distribute the key messages to personnel at health authorities. • Provide messages for a press release. • Issue press release. • Inform partners and allies. • Hold information session for the press. • Place information on the health authority's website. • Put messages on social media. • Answer requests from the media.
Hour 2	<ul style="list-style-type: none"> • Monitor and evaluate the communications media, social media, and questions that the public has.
Hour 3	<ul style="list-style-type: none"> • Inform and provide guidance to doctors, the public health community, and laboratories. • Give doctors and the public health community descriptive notes for patients. • Update the responses prepared for the national emergency telephone line. • Activate the call centers.
Day 2	<ul style="list-style-type: none"> • Host a press conference to provide the public current information on the situation. • Conduct surveys on risk perception and/or the population's need for information.
First 5 days and beyond	<p>New activities:</p> <ul style="list-style-type: none"> • Coordinate calls with partners. • Answer requests for information and products from concerned parties. • Put updated information on the websites. • Provide supplementary materials to the general public. <p>Ongoing activities:</p> <ul style="list-style-type: none"> • Put updated information on the websites. • Update the announcements and messages on travel at ports of entry, as necessary. • Share current information with doctors, health departments, and laboratories. • Disseminate updated key points with personnel and concerned parties. • Monitor and evaluate the communications media, social media, and questions from the public.

Examples of main key messages:

- The Ministry of Health knows that people are concerned about this situation. We understand these concerns and are taking them very seriously. We will share the information that we have right now, and will provide more information as we receive it.
- The situation is still evolving. [Names of the ministries] are investigating the following factors:
 - How many people have symptoms, and the status of their health and their children's health.

- There is currently no vaccine that provides protection against Zika virus. The most frequent treatment for the infection is limited to treating the symptoms as they appear and providing support. Thus, controlling the mosquitoes and their breeding places is essential in order to protect everyone's health.
- Pregnant women have the same risk of Zika infection as the rest of the population. The infection is transmitted by the bite of infected *Aedes* mosquitoes. Many of these women may not realize that they have the virus because they do not develop symptoms.
- All people, including pregnant women and women of reproductive age, should avoid exposure to mosquito bites, for example by wearing clothes that cover the skin (long sleeves), using medicinal mosquito netting, and using the repellents indicated by health authorities, following label instructions. It is extremely important that possible mosquito breeding sites be detected and eliminated in and around all houses.
- The government has been preparing for an event like this:
 - By improving the capacity for surveillance and for monitoring the virus's geographic spread, and by improving the laboratory capacity to test for cases;
 - By working to inform health care providers about the protocols for proper response;
 - By distributing updated information to the general public, to travelers, and to public health partners at the international level; and
 - By controlling the mosquito and working actively with everyone to eliminate the mosquito populations and breeding places.
- The Ministry of Health will put emerging information on Zika virus infection on the website: [www...](#)
- When health risks are uncertain, people need information on what is known and what is not, as well as provisional guidance for decision-making to protect their health and the health of others.
- Timely and transparent dissemination of accurate science-based information can encourage public trust. For this reason, the Ministry of Health will be updating the data every X [interval], providing timely notification of how the situation changes/progresses/evolves.

The above list provides some suggestions on steps to take in designing and implementing action on Zika virus infection. Although the activities are numbered, they are not listed in order of importance or in any particular sequence. The situation may call for some activities to be simultaneous, or to occur earlier or later than indicated by their position in this hypothetical list.

Tasks for the internal organization of the risk communication team

1. Formulate a transparency policy that explains the criteria for disseminating information to the public, including a process for rapidly approving notices and advisories for public

distribution in the case of a real or possible health risk, as well as protocols for issuing notices or advisories outside of normal working hours.

2. Determine which members of the communication team will serve as the Ministry's contact point for coordinating communication with other organizations involved in responding to the Zika virus outbreak. Activate the team responsible for monitoring the media and other communication channels, so that it can gather information on public perceptions.
3. Designate the person who is to be responsible for facilitating and following up on approval of public information messages.
4. Designate and train spokespeople.
5. Based on advice from the relevant experts, decide what measures should be taken with respect to the at-risk population, and make the preparations needed to disseminate previously prepared messages to the public through pre-selected partners and channels of communication.
6. Issue the first announcement. Answer the initial questions frankly and quickly.
 - The information should be disseminated before damaging rumors begin to circulate.
 - In the first announcement, the spokesperson should include information on protecting health, the circumstances surrounding the first case, and the measures that health authorities are taking to protect the public and health workers.
7. Inform the news media when and where information will be updated, and where they can find it on the internet or elsewhere.
8. Use a variety of channels to maintain ongoing communication with the public.

Tasks needed to address the needs of the most vulnerable populations

9. Identify mechanisms for communicating with less accessible groups and those in situations of vulnerability, in order to ensure that they will have access to information on protecting health and on accessing needed care.
10. Define the channels of communication that will be used to reach vulnerable groups.
11. Prepare messages and communications materials in all of the languages and dialects spoken by the target populations.

Relations with direct stakeholders and partners

12. Create an interinstitutional group to facilitate communication among the relevant organizations, and coordinate public communications.
13. Identify groups to support communication activities, such as young people's groups, schools, mayors, unions, churches, and other types of associations and groups. Create databases on these and include them in the preparations.
14. Obtain the support of doctors, nurses, midwives, and health promoters at the primary care level, so that they can be relied on to receive and transmit information.

15. Work with celebrities and other spokespeople, drawing on their help to disseminate health protection information to their followers and supporters.

Preparation

16. Prepare a list that indicates how information will be transmitted and who is in charge of doing this (including partners).
17. Prepare the public for the possibility that cases of microcephaly will occur. During the preparatory stage, distribute messages describing the measures that the government is taking to protect the public and health workers, to provide citizens with information on how to protect themselves and their families, to reduce stigma, and to maintain hope through early interventions.

Preparation of messages; distribution channels

18. Prepare and test key messages, including basic information on the threat to health and information on preventive measures.
19. Develop preliminary versions of press releases, public service announcements, and documents with frequently asked questions that provide information on the health threat and protecting against it.
20. Choose the communication channels that will be used to distribute the messages and to involve the communities.
21. Continually update the information appearing through other channels (such as websites, printed materials, and radio announcements).
22. Work with medical care providers to develop and distribute health protection messages to, and through, health workers.

“Listening”: Monitoring communications

23. Implement mechanisms to monitor the effectiveness of communications, and methods to gain an understanding of the public’s attitudes and motivations.
24. Create a team to monitor the news media and establish a telephone help line.
 - Identify and communicate frequently with community leaders in the at-risk populations, and with other target audiences, to keep abreast of what their members need, want, and are concerned about. Be committed to the community and its leaders through ongoing dialogue about their concerns and about response activities.
 - Activate the call centers and monitor calls from the public.
 - Hold meetings with the community and influential people.

- Monitor news and social media.
- Regularly share the results of monitoring with spokespeople, technical experts, risk managers, partners, and the communications team, so that this information can provide a basis for new communication materials that address erroneous ideas and causes of public concern, and for any necessary adjustments in the response to the health threat.

Relations with the news media

25. Create or update databases on the news media and contact information.
26. Define logistics for working with the media and providing updates.

Community participation

27. Quickly create a community attitude of involvement with vector control and with the targeted behavioral goals.

What resources does the community have that could allow it to more effectively control the mosquito?

28. Establish lines of action, create materials, and test them.
29. Reorient activities in light of impact evaluations.