Health Crisis Communication Guidelines

Final Report

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Introduction: the importance of health crisis communication

We develop in this report a proposal for improving the management of communication during health crises within the European Union. We have based this proposal in several evidences. Firstly, these guidelines have taken into account the management of communication during the A/H1N1 pandemic. Secondly, we have also analyzed some of the main guidelines used by European and International institutions related with health. Another important evidence has been the review of scientific literature (main books, chapters and papers) specialized in the management of health crisis and articles that focus in the analysis of actions taken during the H1N1 pandemic.


2 These documents are: the “Communication on Immunisation – Building trust”; “The 2009 A (H1N1) pandemic in Europe”; the “Review of ECDC’s response to the influenza pandemic 2009/10” from the European Center for Disease, Prevention and Control (ECDC); the “Assessment Report on the EU-wide Response to Pandemic (H1N1) 2009” from the European Commission; the “Pandemic Report and Lessons Learnt” from the European Medicines Agency; the “Risk Communication Guidelines” from the European Food Society Authority; the “WHO Outbreak Communication Guidelines”; the “Best practices for communicating with the public during an outbreak” (WHO); the “WHO global influenza preparedness plan 2005”. In the national level we have gone through guidelines developed by three European Union countries: the “Pandemic Flu. A national framework for responding to an influenza pandemic”, the “Seasonal Flu Plan 2012-2013” and “The Communicable Disease Outbreak Plan: Operational Guidance” from the UK Department of Health, the “Guidelines for Excellence in Health Protection Practice” from the Scottish National Health Service and the “National Plan for Preparing and Responding to a Flu Pandemic” from the Spanish Centre for Coordination on Alerts and Health Emergencies. Finally, we have analyzed the “Risk Communication Guidelines for Public Officials” from the United States.
Finally, our proposed guidelines have also taken into account recent experiences and research on 2.0 tools.

In general, the management of communication during Health Crisis is a landmark topic within the European Union. Health crisis present a high degree of uncertainty and (perceived and real) risk. Health crisis involve diverse stakeholders (government, health authorities, public, the media, etc.), messages and emotions, a situation that requires an effective management of communication. The main goal of communication management is to assure that the main stakeholders that are affected by the crisis have access to the best information for them to take decisions.

Crises all cause insecurity and destabilize social equilibrium so they require quick reactions. These reactions must be integrated into an effective communication strategy that informs and warns people. An effective strategy must also show to the public how to avoid and mitigate negative consequences. Collaborative, clear and understandable communication minimizes not just population fears but also health risk.

Health crisis are sudden events of wide dissemination (we live in a globalized world) that involve a threat to human health. We can classify them in three types: virus infections (e.g. H1N1), food related crises (e.g. EHEC) and health threats caused by environmental or technological disasters (e.g. earth quakes). However, crises in the area


4 Freberg (2012; 2013); Goh (2006); Greenwald (2010); Muralidharan (2011); Liu and Kim (2011); Landau (2011); Kietzmann (2011); Kavanaugh (2011).
of health are events that have very similar general features in their processes and development. That is why it is possible to propose effective guidelines and protocols for their communicative management. In this report, we have developed the main elements need to be considered for the management of health crises (section 1). Then, we have pointed out some guidelines for the use of 2.0 tools (section 2). In the section number 3, we have identified the main stages (no crisis, crisis and post crisis) for the management of crisis and have proposed some useful guidelines in every stage. It has also been important the dissemination to European stakeholders; we have included their feedback to our guidelines in section number 4. Finally, we have concluded with some useful reflections for the future analysis and management of health crises (section 5).

1. Main elements in the management of health crisis

The main elements that we need to consider in the organization and management of communication strategies are: stakeholders, messages, tools and channels and training.

1.1. Stakeholders

It is very important to identify stakeholders and to establish solid relationships with them. Trust between the different stakeholders is basic but, unfortunately, this is not always the dominant situation. For example, scientists and physicians often distrust the media because they think that journalists are more interested in a sensational story than in reporting the facts. Some stakeholders (LMU, 2013, p. 18) have “identified the lack of sense of responsibility on the part of media as perhaps the greatest weakness of the health crisis communication”. On the other hand, “media often become intolerant when officials are thought to be withholding or distorting the facts” (WHO, 2004, p.
29). This kind of distrust could be partially overcome with a fluent communication among the different stakeholders.

The correct definition of stakeholders is vital for assuring a successful use of guidelines and protocols. We cannot forget that every strategy of communication must be articulated according to its influence in the priority stakeholders. For this reason, the first measure needs to be taken is to recognize the stakeholders that are going to have a strategic role in the crisis. We need to answer the following questions:

- What are the main strategic stakeholders in a health crisis?
- What is the qualitative importance of each stakeholder?
- What are the needs and attitudes of the stakeholders?
- What is the information they require? What are the messages they need to know?
- What are the tools the stakeholders need to use in a crisis situation?

CRICORM’s project has identified a total of 1400 different stakeholders that can be contacted. This level of specification will allow tailoring the information needed by the public according to their real necessities.

We can organize the different stakeholders in the following way:

Generic

a. Journalists and media

b. General Public

Specific

a. Health Ministers from the European Union Member States
b. Health authorities in the European, National and Local levels

c. Health Organizations

d. Health professionals and their associations (general practitioners, pediatricians, nurses…)

e. Healthcare providers (hospitals and clinics, etc…)

f. Patient groups

g. Research networks and research institutions

h. Risk groups (e.g. homeless, children, pregnant women, citizens that don’t speak the native language).

i. NGOs

Another way of organizing the stakeholders is taking into account their role in the communicative process:

a. Sources of information:
   - Health Ministers from the European Union Member States
   - Health authorities in the European, National and Local levels
   - Health Organizations
   - Health professionals and their associations (general practitioners, pediatricians, nurses…)
   - Healthcare providers (hospitals and clinics, etc…)
   - NGOs

b. Mediators

   a. Mass media
b. Social media

c. Receivers
   a. Patient groups
   b. Risk groups
   c. General Public

These are the most important stakeholders we need to take into account during a Health Crisis. Once we have identified which are the strategic stakeholders in the crisis, specific messages need to be sent.

1.2 Messages

Another important element in the management of a crisis is messages. Messages are the core of every campaign. It is important to increase the coordination among the different stakeholders of the European Union. We need to take into account that, according to the World Health Organization (WHO) in their guidelines “Outbreak Communication Guidelines”, it is important to announce a crisis as early as possible to prevent rumors, misunderstandings and misinformation. Core messages need to be ready during the non crisis stage that we have developed in the section number 3. Once the crisis has started, according to the own features of the situation, tailored messages will be also disseminated. While preparing and writing messages, there are several elements that need to be taken into account. They are: the configuration of the message, the objectives, the addressees and if the message requires (or not) feedback.
- The configuration of the message: we differentiate two kinds of messages depending on their open or close character. Open messages are subject to be changed and updated (e.g. evolution of the virus) versus closed messages that do not need to suffer any transformation (e.g. behavioral recommendations).

- There are several goals that can be achieved by messages: *Prevention* that is the promotion of attitudes and habits before the crisis; *Information*, when it is necessary to promote knowledge & facilitate decision-making; *Coordination* (amongst institutional stakeholders) and *Reaction* (promotion of actions and procedures).

- Addresses are related with what kind of audience we are trying to contact. If it is a specific target, wide audiences, audiences that are organized according to geographical areas, specialized stakeholders or citizens.

- Finally, it is necessary to think if the message requires feedback or if it is not necessary interaction with receivers.

### 1.3 Tools and channels

It is also required to identify what are the tools and channels that must be used before, during and after the crisis. They are the mediums that will allow the management of information. Tools and channels must be ready before the crisis and constantly updated with new contents during and after the crisis. Some of the key criteria for selecting what tools and channels must be used are:
• Their capacity of adaptation to the necessities of stakeholders.
• The technical competence of the stakeholders that are going to be the main sources of information during the crisis.
• The existence of enough human resources for using the different tools.
• The economic resources of stakeholders, since the use of channels require a constant investment.

It is possible to classify the channels according to the following categories:

a. Online tools and 2.0 channels.

b. Printed publications.

c. Conventional media: press conferences, traditional media, campaigns, outdoor advertising and free phone lines.

d. Institutional stakeholder communications: audio conferences, briefings, healthcare professionals, NGO’s and internal health bulletins.

Let’s see a little bit more in detail these channels.

a. Online tools and 2.0 channels: they are very important for listening and dialoguing with citizens and the rest of stakeholders. In this section we highlight basic on line tools and 2.0 channels in a general way. In the section 2 (Digital communications: specific guidelines for 2.0 channels) we develop in a deeper way the 2.0 channels.
• Websites. They should include credible content and take measures that can enhance the trustworthiness of the website. For this, they must take into account: clear information, identity of the organization, qualitative content, accessibility, easy design and data protection. A complementary option could be the construction of a dark site, with the most frequent questions and answers, press releases, contact information (social networks, health authorities, free phone lines, etc.), news and video resources.

• Social media. Previous crisis, like H1N1, have showed that social media haven’t been used in an efficient way and it is necessary to explore new means and practices (LMU, 2013, p.10). They are important for revealing how people feel and how their reactions change over time. Public health authorities need to be active and reactive when engaging in social media. Feedback must be given almost instantly in order to maintain trust and authorities should ensure they have the resources (time and people) to do so.

• Intranet sites. This was the most used tool during H1N1 for communicating health messages to health professionals (European Commission, 2010, p. 53).

• Specific software: tools like EWRS and HEDIS. EWRS (Early Warning & Response System on communicable disease) goal is to establish a continuous communication between the main emitter actors in a communicable disease crisis to coordinate their actions. Apart from the MS, ECDC and WHO have access to this computer system. It allows the users to maintain audio -
conferences, search and upload information and leave messages and comments. Messages should have a maximum of 3999 characters and comments of a maximum of 1999 characters. Documents can be attached in the messages and comments. HEDIS (Health Emergency and Diseases Information System) goal is to allow the main emitter actors in a communicable disease crisis to get an idea about which is the situation in any moment. For this, organizations such as the WHO, the ECDC or the OIE upload information such as news, reports or scientific advices continuously. HEDIS also provides a document repository, a forum, e-mail, SMS, questionnaires to serve as a model for interviewing stakeholders, ad table and a System of Geographic Information.

b. Printed publications: they are very useful for contacting stakeholders difficult to reach through other channels.

- Posters and leaflets. Make clear who are the information sources including logos, etc…
- Outdoor and static advertising.
- Bulletins/Internal health bulletins for health professionals.
- Newsletters.

c. Conventional media: they are very important for disseminating key messages and articulating the main information of the campaign.

- Traditional media and press releases. It’s necessary to establish a relationship of trust between Health Authorities and the Media and between the Media and the
publics before any public health crisis begins. It is the only way to ensure cooperation during a crisis. Provide media with regular information about vaccine programs, vaccine news and respond quickly and with relevant information. We should also include different sources of information, like experts and researchers for giving media consistent messages with different voices and complementary points of view.

- Press conferences. They need to be very prepared and the spokesperson must have received training in communication with media.

- Institutional Campaigns like vaccination campaigns. In this sense, ECDC (2011, p. 3) points out that it is necessary to take into account “a socio-economic analysis of the costs, benefits and risks of launching vaccination campaigns, as well as a forecast of compliance targets and vaccine acceptance by the target populations”.

- Interviews previously negotiated with mass media.

d. Institutional stakeholder communications: they are key channels for constructing trust networks and reaching risk populations.

- Healthcare professionals. They are one of the main channels of communication with the public. We should work with them so they can welcome questions and acknowledge the benefits and risks of the proposed measures. Two of the three focus groups developed by the Wp4 within CRICORM’s project pointed out that it is necessary to involve healthcare professionals more actively in health
communication process (LMU, 2013, p. 14). We need to develop concrete strategies in order to reach this goal.

- Audio-conferences. The European Commission (2010, p. 38) recommends audio-conferences among the member states. “The agenda for these audio-conferences needs to be much clearer to avoid prolonging meetings and to ensure best use of time” because at times it was difficult to obtain a minimum level of agreement.

- Organizations providing services to concrete risk groups. For example, the European Commission (2010, p. 53) recommends the use of homeless charities and the distribution of leaflets and posters in religious buildings and social areas. These practices should be developed to ensure risk groups are not excluded from communication actions.

- Meetings, workshops, conferences. We should use them for engaging with key target audiences on sensitive issues where we need to explain why we have taken certain decisions. They’re not suitable for reaching large numbers of people. However, a way of enlarge them is sharing the meeting or workshop through the web (European Food Society Authority, 2010). We should use them for engaging with key target audiences on sensitive issues where we need to explain why we have made certain decisions. They’re not suitable for reaching large numbers of people. However, a way of enlarge them is sharing the meeting or workshop through the web (European Food Society Authority, 2010).
• Free phone lines: they must be in the main languages for solving any doubts of the citizens

• Public consultations. They are appropriate when we need to gather different perspectives on potentially controversial-complex issues or testing messages with different audiences. They might be useful for improve communication among different stakeholders. There is no need to use them when we have no intention to use the feedback obtained with this tool (European Food Society Authority, 2012, p. 24).

• Partner, stakeholder methods, directors of institutions. They are good for listening different perspectives and getting a better understanding of the environment. These channels are also positive for building a relationship with key organizations. They can also be useful for disseminating key messages. As in the public consultations, we should not use these channels if we will nots consider the views and contributions of the stakeholders (European Food Society Authority, 2012, p. 25).

• Opinion leaders: health professionals, health authorities and volunteers.

Starting from the features of messages developed before (section 1.2), specifically configuration, objective, addressees and feedback, some channels must be more appropriate than others. Open messages must be disseminated, above all, through digital
channels and institutional stakeholders communications, since they are dialogical initiatives that facilitate the co-construction of messages between senders and receivers. On the other hand, printed publications and traditional media are going to disseminate those messages that are not subject of change or important update (closed messages). When focusing in the objectives of the messages, we can see in the table number 1, how institutional stakeholders communication and digital communications are key channels that respond to almost all the goals of the messages. About the target that is going to receive the information, when the target is a specific group, dialogical channels, like digital and institutional communication allow tailoring the message. On the other hand, printed and conventional media, because of their massive character, are more appropriate when addressing wide audiences. Citizens in general need to be contacted through all the available channels. Again, as we have pointed out with the configuration of the message, when feedback is not necessary printed and the media are recommended tools. Digital and institutional communications are going to be used when we are able-open to process the feedback received by audiences; that is when conversation and feedback can be established in both ways (from sender to receiver and from receiver to sender). Table 1 summarizes the guidelines for the use of channels according to the general features of messages.
<table>
<thead>
<tr>
<th>MESSAGE CONFIGURATION</th>
<th>PRINTED PUBLICATIONS</th>
<th>CONVENTIONAL MEDIA &amp; COMMS</th>
<th>INSTITUTIONAL STAKEHOLDER COMMS</th>
<th>DIGITAL COMMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open (1)</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Closed (2)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>MESSAGE OBJECTIVES</td>
<td></td>
<td></td>
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<tr>
<td>Information (3)</td>
<td>X</td>
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<td>X</td>
<td>X</td>
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<tr>
<td>Prevention (4)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>Coordination (5)</td>
<td></td>
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<td>X</td>
<td>X</td>
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<tr>
<td>Reaction (6)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>ADDRESSEES</td>
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<tr>
<td>Specific target</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>Wide audiences</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
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<tr>
<td>Area audiences</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>Specialized/Institutional</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Citizens</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>FEED-BACK</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>No feed-back</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Feed-back but not relevant</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Feed-back relevant</td>
<td></td>
<td></td>
<td>X</td>
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</tr>
</tbody>
</table>
(1) Messages are subjected to changes and actualizations.
(2) Messages are not subjected to changes and actualizations.
(3) Promote knowledge & facilitates decision making.
(4) Pre-crisis promotion of attitudes and habits
(5) Coordination amongst institutional stakeholders (health authorities...).
(6) In-crisis promotion of actions and procedures

1.4 Training and Chief Communication Officer (CCO)

The final key elements we are going to develop in this section is the training of stakeholders and the necessity of developing a Chief Communication Officer in the European level.

Training and facilitation activities are going to be promoted among the stakeholders that are going to manage communication during health crisis (e.g. health professionals), the stakeholders that are going to act as mediators (e.g. journalists) and also the stakeholders that are going to be the receivers of information (like citizens). The education among citizens is an empowerment that will allow a better optimization of communication processes and health resources.

Firstly, organizations need to work on their communication strategy internally. For a correct management of communication externally, the first step is the preparation of the communication departments of the different stakeholders institutions. Stakeholders need to step up human resources, improve internal coordination and
information sharing, optimizing uncertainty management and work on their social media competence (LMU, 2013, p. 82).

About journalists, it is necessary to improve experts in health that are able to manage in a professional way this kind of sensitive information. Having specialized journalists in health-scientific information improves the flow of information, since professional communicators establish their own information networks with authorities and health professionals.

Finally, it is important to increase the Health Literacy (HL) of citizens in order to ensure their most appropriate behavior during a health crisis. As Nobile and Schulz point out (2013, p. 1), there is “a correlation (…) between inadequate levels of HL and negative outcomes of health. This means, for example, that citizens use more the emergency services rather than the prevention ones or that there is a greater probability of a poor management of chronic diseases, which results in the growth of health costs”. Thus, authorities at the European and national levels should consider devoting time and resources to HL as an investment. The individuals that understand and know how to use basic health information also know how to make good health decisions and this has a positive impact in the health costs. In this sense, 2.0 tools can be very useful in order to increase citizen’s HL. The empowerment of patients is “a process by which people gain control on their lives” (Nobile and Schulz, 2013, p. 2), because they allow public’s participation and awareness. In the specific area of health crisis, tools such as Google Crisis or Ushahidi have demonstrated its potential. Of course, the information spread by these 2.0 tools is essential and we have to ensure that is understood by the citizens.
Without this basic understanding, we can’t talk about HL or empowerment. Here, it’s important to follow the basic journalistic principles to develop information and then follow up how citizens and patients use the information.

Four elements need to be considered in training activities:

- Media training: health authorities need to be trained for their interaction with the media in press conferences, interviews, public meetings, etc…

- Crisis simulations. It consists in reviewing the guidelines and protocols that need to be followed by the main stakeholders like European and national health authorities or communication departments. This simulation reproduces the real-time of a crisis to train how stakeholders react, live and develop their role in the management of communication.

- Crisis management team: it is recommended to prepare and train the team that will lead the management of health crisis.

- Empowerment of citizens, with actions that improve the Health Literacy of people (e.g. campaigns, education actions, workshops, etc.).

It would be also necessary to appoint a Chief Communication Officer (CCO) who will be the main European Authority in Communication for the centralization, management, coordination and decision making of the information before, during and after the crisis. The CCO needs to be in contact with the stakeholders before the beginning of the crisis, for the construction of stable, reliable and trust networks. This person will ensure that the information flows to the media as planned and will share any media material with the communication professionals of relevant stakeholder. The CCO
will have an outstanding role during the crisis and within the crisis management team. This Chief Communication Officer would coordinate the management of information during crisis, a role that is not just supportive but also decision making.

According to the research among stakeholders developed by the University of Munich (LMU, 2013)\(^5\), the stakeholders pointed out the need “for unified content dissemination during health crisis situations” as well as the need of “an authorized speaker to present the information”. The participants “identified that the problem of communication between the key health crisis communicators is often chaotic and uncoordinated”. As a solution to this problem, they suggested “one voice” that would act as a representative for health authorities and professionals during a crisis (LMU, 2013, p. 10 and p. 12). In this sense, the CCO could be this one voice demanded by the stakeholders that participated in the focus groups. A paradigmatic case that shows the necessity of coordinating decisions and activities is the OCT (Outbreak Control Team) developed in the guidelines “The Communicable Disease Outbreak Plan: Operational Guidance” from the UK Department of Health (2012, pp. 10-11 and 19-27). In this sense, OCT is the responsible for taking the decisions about what to do during any outbreak. It coordinates the activities of all the agencies that participate in the outbreak. The OCT should consider if it is better to follow a proactive or a reactive strategy with media. It is also responsible for communicating as required with other professionals, the

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\(^5\) This research project conducted three focus groups among health and media authorities and representatives in Germany, Italy and Portugal during April 2013 (LMU, 2013, pp 8-9). The goal of these three focus groups was to identify the challenges and problems that health authorities and health professionals identified in health crisis communication in Europe as well as the solutions to improve it.
media and the public providing an accurate, timely and informative source of information. The persons that integrate the OCT will change depending on the nature of the outbreak but there use to be: a member of the HPA (Health Protection Agency) an Environmental Health Practitioner, a consultant microbiologist and a Director of Public Health. The chair of the OCT should be appointed in the first meeting and will normally be the CCDC (Consultant in Communicable Disease Control), the CHP (Consultant in Health Protection) or the CE (Consultant Epidemiologist).

At this point, it is necessary to take into account the following aspects of the Crisis Management Team:

- To identify the members of the team crisis: specific health, political and communication authorities or other experts and researchers related with the topic of the crisis.
- To define the tasks (management and communication) of the Crisis Management Team.
- To define which authorities will be primary sources and which will act as secondary sources.
- The Chief Communication Officer must have an updated list of stakeholders in the following levels: European, National and Local.

The crisis team will include a spokesperson/spokesman. Nevertheless this figure will not be a key actor in the communication process since information society is a moment where information is disseminated in a horizontal way through networks. It is necessary to name a spokesperson just in grave situations (for not improving the
perception among citizens that something is graver than it really is). So in grave situations it seems reasonable that a European or national Health Authority is the spokesperson. The spokesperson can be a health authority (previously trained in communication) or directly a communication professional. It is not necessary to give a major importance to this figure since the online strategies have the capacity of disseminate the most important information. Furthermore, it will be necessary that the spokesperson is a relevant Health Authority in cases of grave health crisis.

Some aspects about the spokesperson need to be considered:

- In prolonged risk communication scenarios, the public builds a relationship with a specific spokesperson or a small number of spokespersons that is why having a good communicator is vital. This person has to understand the situation and be able to empathize with the public, give tailored information to particular audiences and provide strong leadership. He/she shouldn’t have paternalistic or judgmental attitudes (Scottish National Health Service, 2008, pp. 28-30).
- The communication plan has to establish who the spokesperson is and, previously, this individual should have received media training. Spokespersons and public officials have the tendency to over-reassure since they fear that media will exaggerate bad news or interpret uncertainties as a sign of weak outbreak management (WHO Best Practices for Communicating with the Public during an Outbreak, 2004, pp. 40 and 45).
- It is necessary to have a spokesperson ready. Before a crisis is breaking there should be agreement at management level on who is the spokesperson. The
spokesperson is member of the crisis team and he/she should spread consistent messages. For this, we have to create supporting materials (Communication on Immunisation – Building Trust from the ECDC, p. 2012, p. 16).

- “The spokesperson must be selected between the colleagues and other officials and experts who can speak to the issues that are most likely to be raised. He or she must never use the expression “no comment” and should never convey disgust, frustration, indifference, and smugness or lose their temper. They also have to be careful with the body language (Risk Communication Guidelines for Public Officials” from the US Department of Health, 2002, pp. 28-33).

2. Digital communication: specific guidelines for 2.0 channels

The management of the last health crises has not made an outstanding use of 2.0 channels. In fact, some stakeholders have pointed out that they were not ready for use them when the crisis started or there were not specific professionals in their communication departments for taking advantage of 2.0 tools (LMU, 2013). However, even when their use have not been very decisive, the role of social media and 2.0 channels of communication in health risk and emergency scenarios have been increasingly taken into account as a part of communication and crisis management strategies. In current complex societies, having increasingly faster and more liquid communication processes 2.0 channels offer unique aspects. They merge as no other tool immediacy, ubiquity (due to the increasing relevance of mobile devices) and interaction. Fast and wide dissemination of messages, citizenship engagement and real
time monitoring of people’s reactions and interactions are some of the advantages that 2.0 channels may contribute with.

2.0 tools can be grouped into six broad categories according to their procedural nature: Content sharing channels, Content gathering channels, Content display and publishing channels, Geoweb, Social networks and Mobile media (see table 2).

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>2.0 TOOLS</th>
</tr>
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<tbody>
<tr>
<td>1 CONTENT SHARING</td>
<td>• Pictures</td>
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<td>• Podcasts</td>
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<td>• Video</td>
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<td>2 CONTENT GATHERING</td>
<td>• Content syndication &amp; RSS</td>
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<td></td>
<td>• Content aggregation / curation</td>
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<td>3 CONTENT DISPLAY &amp; PUBLISHING</td>
<td>• Buttons/Badgets/Plugins</td>
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<td>• Geoweb platforms</td>
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<tr>
<td>5 SOCIAL NETWORKS</td>
<td>• Social networks</td>
</tr>
<tr>
<td>6 MOBILE MEDIA</td>
<td>• Mobile websites</td>
</tr>
<tr>
<td></td>
<td>• Mobile Apps</td>
</tr>
</tbody>
</table>

2.1 Content sharing

This category includes platforms and applications addressed to make content available to others in terms of sharing (and thus connected to participants’ identity or social tie). They are useful to channel messages within the frame of promoting habits, values or engagement. Content sharing oriented social media can be also a useful tool to
support institutional stakeholders’ image building or to enhance stakeholders’ social presence without depending on traditional media filters.

- **Image sharing.**

  It consists of providing the followers images related to public health with the aim of reinforcing messages or present information via users’ sharing. Some aspects need to be considered about image sharing:

  - Images can be shared via already existing image sharing tools, like Flickr or Instagram.
  
  - The use of images as a communication form in conversational group or peer-to-peer interactions is widely spread also in social networks like Facebook, Pinterest or Twitter.

  - Institutional stakeholders may create their own picture repository and make it selectively accessible via social networking picture tools (Instagram, Flickr, Pinterest…) or use ad hoc pictures via standard social networks.

  - The identity of the author of the image (institutional logos and identity) must be clearly present.

  - If used as in a campaign and when pictures involved complex messages, qualitative pre-tests with users samples are recommended in order to avoid misinterpretations

  - Picture sharing tools are useful mainly in non-crisis and post crisis contexts.

- **Podcasts**
Similar in terms of functionality to other forms of content sharing (like pictures), their length depends on the objectives and the audience they want to reach (CDC, 2012). Podcasts are not as attractive and versatile as visual content. Some other aspects useful for the management of podcasts are:

- Resorting to known speakers, institutions or brands and delivering podcasts as part of series contributes to increase their efficacy.
- Mostly recommended as a complementary content form within a multi-media context.
- They can be an added value integrated into other channels, like web repositories or mobile apps.
- In any case, podcasts should be professionally edited short pieces with standard radio-level quality.
- Podcasts are an institutional message format: the identity of the authoring institution or personal authority should be clearly marked.

• Video sharing.

Videos are the prevalent online format both in media and conversational environments. Video watching and sharing is one of the preferred activities both in desktop and mobile environments: 90% of Internet traffic is video and 50% of mobile wireless network traffic is video (66% in 2016) (Diode Digital, 2013). Short videos can be very effective in transmitting relevant information, disseminating health related habits or promoting attitudes and behaviors in emergency situations. They can get viral diffusion, which involves not only reaching a vast audience, but also getting a high level
of engagement. Most video sharing services and applications in the Web have migrated to the mobile environment, and most of them (Vimeo, Dailymotion, Metacafe and others) follow the parameters settled by YouTube. The latter is much more than a video-sharing site since it combines the features of a video publishing tool, a social network and a browser. It is a very relevant channel as a video-browsing environment (where you can find visual documents about virtually everything) and as a user generated content publishing tool. These kind of tools are a relevant channel when it comes to crisis communication actions (like, for instance, spreading visual information about how to proceed in given situations). Other aspects about video sharing tools are:

- They are reputational channels where institutions, brands or authorities may find a source of support for their image and communication purposes. Even more than standard television, corporate or institutional online video websites, video channels are the current social window through which users visually identify aspects, topics and values about the brand, the product or the mission.

- Health authorities and institutional or professional stakeholders can take advantage of this tool (rather than people with user generated content).

- Videos should be branded or co-branded as a part of a well-structured series, consisting of well addressed visual messages, connected to other communication channels via url links, social network profiles, etc.

- As in all other content sharing contexts (pictures, podcasts, blogs, etc.), the social-network-like functionalities of sites like YouTube involve additional tasks (mainly carefully answering and moderating comments) and pluses: they allow
to monitor users’ activity and engagement (number of downloads, views, comments, etc.).

- Videos can have different durations. Adapt the duration of the video to the communicative action and to the reception environment. Devices are not determinant in this respect: 42% of videos viewed on a tablet are over 10 min. duration and 52% of videos viewed on a PC are under 3 min. long (Diode Digital, 2013)

- The main advantages of video messages are their immersive, engaging appeal, but their dangers involve banalization and spectacularization. Take specially care in delimiting and foreseeing the use of your videos by other stakeholders (e.g. mass media).

- Using videos in sharing 2.0 contexts does not mean resorting to amateur video making. Videos must be professionally planned, shot and edited, like a TV commercial or any other professional communication format.

- Video sharing tools are useful mainly in non-crisis and post crisis contexts, but they can be used in pre-crisis and crisis contexts.

- Video sharing tools effectively contribute to accomplishing the following tasks:
  - Building stakeholders’ reputation and trust via promotional and explaining videos
  - Contributing to preparedness of players, processes and tools via video tutorials
  - Helping in prevention via video tutorials on adequate habits and behaviors
- In external communication strategies (with citizens and media) they are potentially useful also in crisis follow-up and assessment of communication.

- Stakeholders should evaluate and coordinate the different tools and strategies involving video sharing: as an institutional shop window, as an institutional video repository, as a part of ad hoc campaigns, as a series of video-tutorials…

In this respect, different video channels can be coordinated.

2.2 Content gathering

This category includes platforms and applications addressed to collect and manage content from different sources. They are useful to channel a number of message sources and manage them by topic field (for example, in the context of campaigns) or by kind of emitter. They are also functional to generate a quick overview about the discourses and influencers on a given issue as well as to enhance a player's visibility online.

- **Content Syndication and RSS**

Content syndication consists of a technical application that enables partner organizations to display current player’s or topic related content and allows visitors to the partner’s website access ones own content without leaving the partner website (CDC, 2011: 15). Really Simple Syndication (RSS) provides news headlines, blog posts or selected website content updated automatically. Partners can personalize the information they receive by choosing to subscribe to certain topics they are interested at. It allows displaying purposeful content on partner sites and becoming a source in a set
of specialized interest-driven multi-source information environment. Content syndication and RSS are an aid in communication actions related to improving stakeholders reputation and visibility, operating as a tool complementary to corporate blogs and websites. Some other aspects about this tools:

- It is important to clearly identify partner sites and content sources
- Carefully design blog/site compatibility with CS/RSS sources and standards
- There is a danger of loosing control over the coherence between message and context in RSS fed blogs and websites that must be monitored and prevented.

**Content aggregators:**

Content aggregators provide a hybrid channel that aggregates content and information from different sources selected by the user, including mass media, blogs, websites and social media/networks. Some content aggregators are especially designed for mobile devices (smart phones and tablets), such as Flipboard or Zite. These constitute a new generation of content aggregators named as ‘Social magazines’ that have been proved to be a relevant channel for branded and institutional content. Content aggregation and content curation becomes a form of socializing content topic and authoring preferences. As such it allows more efficiently handling the risks and benefits of content syndication and RSS. Functional and strategic applications are similar to those of CS/RSS, mainly involving stakeholders’ reputation and visibility and knowledge dissemination, complementary to blogs and website. In order to become a content curator reference in the Internet, stakeholders need specialized collaborators or
curation teams. The social networking environment of content aggregators allows for monitoring the reach and impact of content curation.

2.3 Content display and publishing

This category includes platforms and applications addressed to make content available to others in terms of display or publication. Though many of them include social network and content sharing features, their distinctive nature consists of showing content, rather than sharing. This kind of social media may vary from simple display formats (like badges) to rich, socially oriented content publication systems (like blogs), and so may do their applicability in terms of crisis communication strategy.

- **Buttons, badges and plug-ins.**

  They are used to promote contents and short messages with partner organizations and individuals, including a posted image plus a short message and a link with more information. Plug-ins are desktop computers applications that can be installed into user’s desktop screen or as web browser’s functionalities to display featured content. Functional and strategic applications are similar to those of CS/RSS, mainly involving stakeholders’ reputation and visibility and knowledge dissemination, complementary to blogs and websites. This 2.0 tools:

  - Demands a coherent design of compatibility with blog or site
  - Demands building up powerful content delivery base. They are easily forgettable if not regularly useful to user.
• Blogs

Blogs are time-dependent content management systems that involve interaction with users via comments, recommendations and linking options. They have become a common window for brands, institutions and influencers to reach audiences online and to leave a trace of usual activities or information. However, blogs are not the ideal channel to reach general public or indiscriminate audiences. Blogs are useful in delimiting specialized or topic-oriented audiences. Posts must be short, oriented to content sharing and linked to other online resources, both content-focused (like websites or landing pages) and conversation-oriented (like social networks). Blogs are a useful tool in developing topic-oriented conversations with users and in settling institutional-identity centered relations with stakeholders. Functional and strategic applications involve stakeholders’ reputation and visibility, influencing and agenda setting, specific campaign support, information and analysis about concrete events and/or areas (topic oriented actions), building a community of users and effective offering advice and support. Other guidelines for the use of blogs in the management of health crisis are:

- Blogs are polyvalent tools that are to be used differently whether we are addressing general public or specialized/segmented audiences.
- Blogs involve using multimedia formats (combinations of video, text, pictures, audio and links) and coordinating publishing and conversations with social networks.
- Design and refine an editorial policy, coherent with corporate web resources
- Blog is alive: Publish regularly, answer comments promptly. Create an editorial
teal and a collaborators network.

- Enhance blog’s reach through other social media channels: curation and RSS,
  aggregators, etc.

- Integrate multimedia languages, and take advantage of video channels, podcasts,
  etc.

- Consider the utility of specialized blogs, addressed for example to specific
targets (health professionals, emergency agents, volunteers and activists…).

2.4. Geoweb

Location technologies can be applied to both web-based and mobile technologies
and services. Location technologies are transversal to digital platforms, with useful
applications to web and web 2.0 that enhance the functionalities of online
communication channels like social networks or content exchange platforms. One of the
first applications is geotagging both users and user generated content, so that relevant
information about position can be automatically added as metadata to the
communication process and to the meaning and purposes of the message. One of the
consequences of the consolidation of geoweb in web 2.0 communication services is the
popularization of interactive event maps as a prevalent information interface. Since they
are not only (and mainly) a communication channel, but rather an information
management tool, decisions about the integration of geoweb systems show to be at a
core strategic level. Some other recommendations for the use of this tool in the
management of health communication are:
- Take a strategic decision about whether to take advantage of existing platforms or create a new one:
  - implement your own geoweb based on existing platforms (Ushahidi, Google maps API…) and integrate it into your web platform
  - or associate existing geoweb alert systems (Google Crisis, Google Person Finder…)

- It is critical as well how to integrate (if at all) internal and external communication flows

- Establish a system to effectively filter false positives (via algorithms, redundancies and information management systems, etc.)

- It is also one of the best online resources in taking advantage of multi-device, crossplatform, social, mobile digital environment

### 2.5 Social Networks

Social networks constitute the operational foundation of social media: their focus on social interactions is the base for the process of content socialization that characterizes the web 2.0 and mobile Internet. Social networks may be addressed to niche users (like academics –Academia-, professionals –Linkedin-, game players –Open Feint–…) or deployed as a general group-building online interaction service (like Facebook or Google +). Even though, different social networks involve different interactional dynamics, and consequently, they offer different advantages in terms of
crisis communication management. For example, the two most widely used social networks (Facebook and Twitter) are differently oriented: Facebook is operationally focused on tie making, self-presentation and relationships, while Twitter is deeply focused in conversations and events. It is necessary to use Facebook and Twitter metrics to assess and improve your communication strategies in social networks.

In the case of Facebook, relationships (or ties) depend highly on identity (ie. on person’s visibility), in Twitter conversations have changed their focus from identity to events. To put it in other words, while the introducing question in Facebook is “What are you thinking about?”, in Twitter it has shifted from “what are you doing?” to “what’s happening?”. Facebook is a powerful tool to back institution’s or stakeholders’ social perception and presence, by building a close, even frequent contact and an effect of availability which may be also helpful in concrete campaigns and other strategies to promote healthy habits or skills about how to react in given situations. Due to its proven capacity to build community and to insert presence into group exchange, Facebook also provides engagement and reputation.

On the other hand, twitter constitutes a unique case of an event-centered conversational social media, which undoubtedly makes it a relevant tool in crisis communication management, especially in emergency situations. Its singularity consists in combining user identity (twitter account), an observable structure of social ties (followers), short 140 characters messages and event or topic markers (hashtags) that define the topic of conversation. Both in terms of message diffusion and monitoring, different structures of data are possible according to the combinations of the above-mentioned factors. This makes Twitter a powerful tool not only in rapidly disseminating
messages and configuring communities of digital volunteers, but also in monitoring and controlling the drift of communications and people’s reaction in crisis situations. When using Twitter stakeholders have to consider different levels of strategic identity making:

- Twitter account level: clearly differentiate non-crisis accounts from crisis and post crisis accounts. Choose the name of the account by stakeholder identification (for example, @EHA for ‘European Health Agency) and events (for example @Haiti_earthquake) depending on aims and tasks.
- Topic level (what is a tweet or a thread of tweets about)
- Hashtag level (in order to connect different topics and tweets and to settle a conversation topic).

2.6 Mobile media

Mobile communications have deeply influenced the current evolution of digital media and communications. Social media and social networks are progressively turning to a mobile-first conception in the last years. In terms of communication dynamics, mobile technology have introduced or enhanced relevant aspects (personalization, ubiquity, pervasiveness, acceleration, location awareness, social network integration and capability to gather and monitor user behavior information. Websites must be responsive (i.e. they adapt their design and display to mobile devices when accessed from mobile networks). However, 86% of the time people use mobile devices is devoted to mobile applications. This means mobile websites are relatively inefficient as communication tools. On the other side, mobile applications pose three main possible benefits regarding communication strategies:
By inserting utilities and brands into user’s everyday digital routine, mobile apps can be powerful tools for enhancing people’s perception about an organization.

Mobile apps can be a creative way to promote health related habits, routines or skills via casual games or other forms of instrumental campaigns.

Mobile apps allow taking advantage of data and hardware functionalities included in the different platforms’ APIs (Application Programming Interfaces). For instance, Google’s Android last API actualization includes features like activity recognition and geofencing that may be useful tools in the context of crisis communication. Geofencing refers to the virtual delimitation of an area by triangulation. Using geofencing as an app feature allows associating mobile functions to device’s position, so that being within or outside that defined area enables given functions (receiving a notification while entering or approaching an area, for example). Activity recognition involves determining the kind of user movement patterns upon data provided by built-in sensors (walking, running, biking, driving a car…) (http://www.androidcentral.com/google-unveils-three-new-location-apis).

### 2.7 Monitoring

Monitoring and analyzing metrics is one of the main pluses –together with interaction with users- in using 2.0 channels for crisis communication management. Monitoring involves not only social network metrics, but also and measuring enhancing the reach of your online communication actions. This includes SEO strategies, taking into account which terms and tags to use in order to maximize your presence and
visibility in Web search engines. In the case of mobile applications, information collected via built-in sensors (like GPS, accelerometer, gyroscope, etc.) can be added to information about device and application use. Positioning and movement can be relevant information not only in planning communication actions, but also in general crisis intervention strategies. Monitoring social network activity allows as well to knowing about your audience/followers, both in quantitative and in qualitative terms:

- Through specific metrics, like Klout, you can measure your influence and reach in quantitative terms
- Through hashtags analytics you can assess and monitor the evolution of topics, rational or emotional answers and personal positioning of people involved in that conversation

When planning to use 2.0 channels in crisis communication management it is important to co-ordinate resources devoted to producing, launching and answering messages (implement communicative actions) with those addressed to monitor and evaluate communicative actions implementation.

3. Stages in the management of health crisis communication

There are 3 stages that must be taken into account for the correct preparation and management of a crisis communication: no-crisis and prevention, crisis and the post-crisis. Health crisis, even when they can be provoked by several different causes (viruses, food, environmental or technological disasters), have a similar essence and share common communicative patterns. That is why the identification of stages is a general and basic aspect that allows organizing communicative resources and responses.
3.1. No crisis and prevention

No-crisis is the stage when there is not an identified critical situation. It is a “peace” period when nothing is going on and there is no prediction that a crisis can occur. This is the period of time where we need to organize and update information, tools, human resources, and strategies. During the no-crisis period it is necessary to improve prevention, education among stakeholders, to build trust with the stakeholders and to have everything ready, including media training, crisis simulations and the crisis management team. It is the perfect moment for the Chief Communication Officer also builds trust and interchanges information with the different stakeholders. For the development of trust among stakeholders it is basic to construct a network that allows interchanging information in a reliable way. It is how we ensure cooperation when the crisis starts. Crisis will appear sooner or later that is why it is important to be ready for facing a risk situation.

It is important to understand the difference between risk and crisis communication. They both “share an essential purpose of seeking to limit, contain, mitigate, and reduce harm” (Seeger & Reynolds, 2008, p. 11). However, they are used at different times. We can say that risk communication is used when things might go wrong and crisis communication is used when things go wrong. Said differently, risk communication is previous to crisis communication. “Risk communication responds to any event that could cause public concern and could focus media attention on an organization” (Telg, 2010, p. 2). Thus, risk communication is activated before a thread occurs for trying to prevent or, at least, reduce its impact.
In the case of risk communication applied to the field of public health, it informs about dangers for health, tries to encourage protective behaviors and to prepare and respond to a public health threat. In the case of communicable diseases it is very important the early detection, the identification of the first cases in order to offer a rapid response, have a wider control opportunity and prevent the crisis. An example of a risk communication topic could be: “Is it safe to eat this meat under these conditions?” The goal of risk communication is to establish a strong relationship based on trust between an organization and all its stakeholders. Therefore, risk communication is vital during the prevention phase. Here, Telg (2010, p. 2) highlights the importance of distinguishing between objective and subjective risk. The first one is based on scientific research and the second one is related with what people perceive.

Taking into account that the main and most general three aspects of this stage are reputation & trust, preparedness and prevention, there are some channels that are going to be more appropriate than others.

- **Stakeholders reputation and trust** implies building public knowledge and trust. For improving the reputation and trust between the sources of information (e.g. health authorities/health professionals) and receivers (e.g. citizens) institutional campaigns, health care professionals, content gathering and content display 2.0 channels are appropriate tools for constructing reliable networks among stakeholders. For example, picture sharing can be associated during this non crisis stage to well known celebrities or authorities.
- **Preparedness** means settle and test communication networks and channels, design emergency players’ protocols and train the required skills and competences. For doing so, institutional stakeholders communications, videos, blogs, social networks and web platforms are recommended.

- **Prevention** includes the promotion of health habits and skills, monitor and process data. Channels like leaflets, campaigns, outdoor advertising, health care professional and internal bulletins seem appropriate tools for achieving this goal. About digital channels, we can use all of them for promoting healthy skills among population. For example, podcast sharing is appropriate for prevention and building stakeholders’ reputation and trust.

The following table (table 3) shows some recommended best practices and measures that need to be implemented. We have organized these best practices taking into account the role of the stakeholders in the communication process (sources, mediators and receivers, as it has been developed in the section 1.1.).

<table>
<thead>
<tr>
<th>Targets</th>
<th>Measures</th>
<th>Best practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>General considerations for the sources of information</td>
<td>Improving preparedness in the organization and in the network of response organizations</td>
<td>Develop the trust and reputation with and among the stakeholders</td>
</tr>
<tr>
<td></td>
<td>Improving information exchange and training of crisis communication activities in the organization</td>
<td>Develop information networks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Train to stakeholders for the management of</td>
</tr>
</tbody>
</table>
and within the response network

Improving network facilities and availability of manpower

Information during crisis

Recruit spokespersons with effective presentation and personal interaction skills.

Train staff—including technical staff—in basic, intermediate, and advanced risk and crisis communication skills. Recognize and reward outstanding performance.

Anticipate questions and issues.

Prepare and pretest messages.

Be prepared to manage interactivity in web 2.0 tools.

<table>
<thead>
<tr>
<th>Relationships with mediators</th>
<th>Establishing cooperation with news media and journalists for crisis situations</th>
<th>Develop the trust and reputation with and among the stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Establishing cooperation with important opinion leaders in social networks</td>
<td>Develop information networks</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interaction with receivers</th>
<th>Analysis of public groups and their media use</th>
<th>Building public knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monitoring of risk perception and general public understanding of risk</td>
<td>Promote health habits and skills, monitor and process data</td>
</tr>
<tr>
<td></td>
<td>Contribution to the general public preparedness</td>
<td>Identify important stakeholders and subgroups within the audience; respect</td>
</tr>
</tbody>
</table>
Finally, messages must be constructed according to the best practices and measures developed above, including: information about channels and tools open to the questions and concerns of the public; basic information about vaccination and other self-protective measures; and information about healthy behaviors and attitudes paying special attention to possible risk groups. It is important to promote communicative skills and habits among citizens, empowering them with the basic skills for them to use health information resources. As we have already developed in the section number one, the main goals of messages during non-crisis stage are going to be prevention and information, something that must be covered by digital and institutional communications stakeholders (see section 1.3., tools and channels, table number 1).

3.2. Crisis

Crisis communication is activated when the thread occurs, once the crisis explodes. The goal is to reduce the consequences of the crisis but not to avoid or prevent, as in the case of risk communication. Although crisis communication is used in unexpected and uncertain situations, the organization must have a previous plan for facing them. This plan includes basic aspects as who are the persons who integrate the crisis communication team, which is the chain of command in order to take decisions or
which tools and channels do we have to activate in order to communicate with the stakeholders.

Once the crisis has started, we can differentiate two sub stages. The first evidences (pre-crisis, lowest level of gravity/severity) and then the crisis itself that is the moment when all mechanisms need to be activated. It is important to not underestimate any possible crisis and to try to organize quickly an effective communication. The first step is to identity if we are facing a health crisis or, on the contrary, it is a minor health situation.

There are several elements that we need to take into account when managing a crisis communication: the chief communication officer and the crisis management team; the organization and interaction with stakeholders; the messages and the channels are going to be used.

3.2.1 Chief Communication Officer and stakeholders interactions

As we have pointed out in the section number 1, it is necessary to centralize the management of information through a multinational collaborative network between the member states, the European authorities and the WHO. The CCO is the communicative authority that will be responsible for these tasks. This aspect might seem too obvious but previous experiences in the management of crisis communication, like H1N1, have shown that “there was a significant gap between the scientific advice offered by ECDC to Member States and the strategic decisions taken by many of them” in key topics such as “procurement of medicines or vaccines and in communication to the public” (Review
of ECDC’s Response to the Influenza Pandemic, 2011, p. 32). At this point, it is necessary that member states “evaluate and implement required and relevant scientific advice and supportive actions” (Review of ECDC’s Response to the Influenza Pandemic, 2011, p. 32). Members of the EU need to find a common approach in vaccination strategies and systems for data collection: number of vaccinated people, vaccine effectiveness, pregnancy registries and background incidence rates of diseases.

Once the crisis has started, the CCO and the crisis management team need to identify what are going to be the strategic stakeholders of the crisis and what are going to be stakeholders with a secondary role (or non strategic); what are going to be the primary sources of information and the secondary ones; what is the role and what are the tasks of each member of the team crisis; what are going to be the messages and channels are going to be used. The coordination must be made in all levels (European, national, local), targeting risk groups and, in general, using the strategies have been implemented and developed during the non crisis stage.

In relation with the public, its tolerance of risk is related with seven main aspects (IHR Risk Communication Capacity: Information Dissemination including Media Relations, 2011, p. 4):

a. Its perception of authorities concern.
b. If the impacts of the problem are shared equitably.
c. If the impacts are communicated voluntary or coerced.
d. If the risk is manmade or natural.
e. If the information is shared by the authorities.
f. The responsiveness of decision-making.
g. The trustworthiness of those in charge.

When the crisis has started, the education of citizens we have proposed during the non-crisis stage will improve the effectiveness of the campaign and other communication strategies.

The necessity of improving information exchange between certain stakeholders is an aspect that has been also highlighted by health professionals at different levels (LMU, 2013). Specifically:

- It is necessary to coordinate the different levels, European, national and local since “in many cases, some of the key stakeholder groups, especially at a local level, are not included in the communication network used by the health authorities” (LMU, 2013, p. 17).

- It is also very important to coordinate the communication between Health Authorities and Health Professionals, since it has been pointed out a lack of information and support in previous crisis (LMU, 2013, p. 14). That is why communication activities between the different EU stakeholders need to be better coordinated paying special attention to the integration of local levels. In this sense, it is necessary to have a system to interact and follow the same instructions at different levels.
• It is necessary to build credibility and trust between Health Authorities and the Media; Health Authorities and the Public; and the Media and the Public.

Finally, it is important to pay special attention to risk groups as it is the case of homeless, children, pregnant women, overweight, elderly, chronically ill, young people, tourists, or immigrants that don’t speak the native language. Health Authorities, health professionals and the rest of the stakeholders that have been identified as sources of information and also mediators (see section 1.1.) need to tailor and construct specific messages for risk groups taking into account the different communicative mediums we have proposed. Health authorities need to coordinate and integrate different communication strategies, including NGO’s or other social institutions. It is recommended that the Chief Communication Officer and other communication departments have an updated database of the NGOs can be contacted during the crisis. Some of the main social institutions that must be contacted for achieving risk groups are presented in table number 4. We have detailed name, contact person and email/telephone number, website, number of countries and continents where that social institution works, and the risk groups that are related with the NGO.

<table>
<thead>
<tr>
<th>Name</th>
<th>Contact person and email or telephone</th>
<th>Website</th>
<th>Countries</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caritas</td>
<td>Thorfinnur Omarsson</td>
<td><a href="http://w">http://w</a></td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

The risk groups proposed by the European Union and included in the table with numbers are: children (1), immigrants (2), pregnant women (3) and homeless (4). We have also included citizens in situations of social exclusion (5). In case the NGO covers all the groups, we refer to it as (6).
<table>
<thead>
<tr>
<th>Organisation</th>
<th>Contact Person</th>
<th>Tel/Alias/Email</th>
<th>Website/Links</th>
<th>Countries/Regions</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Public Health Alliance (European Confederation of Care Home Organisations)</td>
<td>Piero Calandriello</td>
<td>Tel: 390636382076 <a href="mailto:piero.calandriello@echo-eu.com">piero.calandriello@echo-eu.com</a></td>
<td><a href="http://www.echo-eu.com/">http://www.echo-eu.com/</a></td>
<td>11 European countries</td>
<td>X</td>
</tr>
<tr>
<td>European Public Health Alliance (EPHA)</td>
<td>Anne Hoël</td>
<td>Tel: 33970449337 <a href="mailto:a.hoel@epha.org">a.hoel@epha.org</a></td>
<td><a href="http://www.epha.org/">http://www.epha.org/</a></td>
<td>It mainly works in Central and Eastern Europe</td>
<td>X</td>
</tr>
<tr>
<td>Save the Children</td>
<td>Claudia Kepp</td>
<td>Tel.: 0302759597928 <a href="mailto:presse@savethechildren.de">presse@savethechildren.de</a></td>
<td><a href="http://www.savechildren.org">http://www.savechildren.org</a></td>
<td>120 countries in the five continents</td>
<td>X</td>
</tr>
<tr>
<td>COFACE (Confederation of family organisations in the European Union)</td>
<td>Agnes Uhereczky</td>
<td>Tel: 322 500 5691 <a href="mailto:auhereczky@coface-eu.org">auhereczky@coface-eu.org</a></td>
<td><a href="http://www.coface-eu.org">http://www.coface-eu.org</a></td>
<td>22 Member States of the European Union</td>
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<tr>
<td>Dynamo</td>
<td>Edwin de Boevé</td>
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<tr>
<td>Organization</td>
<td>Contact Person</td>
<td>Email/Website</td>
<td>National Platforms</td>
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<tr>
<td>International-Street Workers Network</td>
<td>Tel: 32 2 378 4422</td>
<td><a href="mailto:edwin@travailderue.org">edwin@travailderue.org</a></td>
<td>national platforms of educators in Europe, Latin America, and the Caribbean</td>
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<tr>
<td>EAPN (European Anti-Poverty Network)</td>
<td>Barbara Helfferich Tel: 322265850 <a href="mailto:barbara.helfferich@eapn.eu">barbara.helfferich@eapn.eu</a></td>
<td><a href="http://www.eapn.eu">http://www.eapn.eu</a></td>
<td>All the European countries</td>
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<tr>
<td>ESN (European Social Network)</td>
<td>Irina Savin Tel: 44 0)1273 739039 <a href="mailto:info@esn-eu.org">info@esn-eu.org</a></td>
<td><a href="http://www.esn-eu.org">http://www.esn-eu.org</a></td>
<td>All the European countries</td>
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<tr>
<td>Eurochild</td>
<td>Jana Hainsworth Tel: 32 (0)2 211 05 50 <a href="mailto:jana.hainsworth@eurochild.org">jana.hainsworth@eurochild.org</a></td>
<td><a href="http://www.eurochild.org">http://www.eurochild.org</a></td>
<td>All the European countries</td>
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<tr>
<td>Eurocities</td>
<td>Tel: 3225520888 <a href="mailto:info@eurocities.eu">info@eurocities.eu</a></td>
<td><a href="http://www.eurocities.eu">http://www.eurocities.eu</a></td>
<td>36 European countries moreover Turkey and</td>
<td></td>
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<tr>
<td>Eurodiaconia</td>
<td>Heather Roy Tel: 32 2 234 3861</td>
<td><a href="http://www.euro.eu">http://www.euro.eu</a></td>
<td>23 European countries</td>
<td></td>
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</tr>
<tr>
<td>Organization</td>
<td>Contact Details</td>
<td>Website</td>
<td>Countries</td>
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<tr>
<td>Eurohealthnet</td>
<td>Makfire Alija</td>
<td><a href="http://eurohealthnet.eu/">http://eurohealthnet.eu/</a></td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEANTSA (European Federation of National Organizations Working with the Homeless)</td>
<td>Tel: 32(0)25386669</td>
<td>feantsa.org</td>
<td>30</td>
<td></td>
<td></td>
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<tr>
<td>Eurohealthnet</td>
<td>Makfire Alija</td>
<td><a href="http://eurohealthnet.eu/">http://eurohealthnet.eu/</a></td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PICUM (Platform for International Cooperation on Undocumented Migrants)</td>
<td>Michele LeVoy</td>
<td><a href="http://picum.org/">http://picum.org/</a></td>
<td>All the European countries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Médecins Sans Frontières</td>
<td>Tel: 0041228498484</td>
<td><a href="http://www.doct80">http://www.doct80</a></td>
<td>80</td>
<td></td>
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</tbody>
</table>
For improving the interaction among stakeholders, some measures and best practices must be implemented. We summarize some of them in the following table, taking into account the different stakeholders that intervene during the crisis according to their role in the communicative process (sources of information, mediators, receivers):

<table>
<thead>
<tr>
<th>Targets</th>
<th>Measures</th>
<th>Best practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>General considerations</td>
<td>Instructions for recovery efforts</td>
<td>Disclose risk information as soon as possible; fill information vacuums.</td>
</tr>
<tr>
<td>for the sources of</td>
<td>(Instructive communication)</td>
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<td></td>
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<tr>
<td>information</td>
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</tr>
<tr>
<td>Stimulating a more accurate understandings of the recovery and ongoing risks (Affective communication)</td>
<td>If information is evolving or incomplete, emphasize appropriate reservations about its reliability.</td>
<td></td>
</tr>
<tr>
<td>Information exchange and coordination in the organization and within the response network</td>
<td>If in doubt, lean toward sharing more information, not less—or people may think something significant is being hidden or withheld.</td>
<td></td>
</tr>
<tr>
<td>Assist cooperation in the organization and within the response network</td>
<td>If you don’t know or are unsure about an answer, express willingness to get back to the questioner with a response by an agreed upon deadline. Do not speculate.</td>
<td></td>
</tr>
<tr>
<td>Stimulating cooperation and coordination in the organization and within the response network</td>
<td>Discuss data and information uncertainties, strengths, and weaknesses— including those identified by other credible sources.</td>
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<tr>
<td></td>
<td>Identify worst-case estimates as such, and cite ranges of risk estimates when appropriate.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Do not minimize or exaggerate the level of risk; do not over-reassure. If errors are made, correct them quickly.</td>
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</tr>
<tr>
<td>Cite credible sources that believe what you believe; issue communications with or through other trustworthy sources.</td>
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<tr>
<td>Coordinate all inter-organizational and intra-organizational communications.</td>
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<tr>
<td>Devote effort and resources to the slow, hard work of building partnerships and alliances with other organizations.</td>
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<tr>
<td>Use credible and authoritative intermediaries between you and your target audience.</td>
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<tr>
<td>Consult with others to decide who is best able to take the lead in responding to questions or concerns about risks.</td>
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<td></td>
</tr>
<tr>
<td>Do not attack individuals or organizations with higher perceived credibility.</td>
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<td></td>
</tr>
<tr>
<td>Demonstrate respect for persons affected by risk management decisions by involving them early, before important decisions are made.</td>
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</table>
Involves all parties that have an interest or a stake in the particular risk. Include in the decision-making process the broad range of factors involved in determining public perceptions of risk, concern, and outrage.

Use a wide range of communication channels to engage and involve stakeholders.

Adhere to the highest ethical standards; recognize that people hold you professionally and ethically accountable.

<table>
<thead>
<tr>
<th>Relationships with mediators</th>
<th>Involving the news media</th>
<th>Be accessible to reporters; respect their deadlines.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designated crisis agency</td>
<td></td>
<td>Prepare a limited number of key messages before media interactions; take control of the interview and repeat your key messages several times.</td>
</tr>
<tr>
<td>spokespersons and services for journalists</td>
<td></td>
<td>Keep interviews short. Agree with the reporter in advance about the specific topic of the interview and stick to this topic during the interview.</td>
</tr>
<tr>
<td>Ongoing media relations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction with receivers</td>
<td>Analysis of public groups and their media use</td>
<td>Before taking action, find out what people know, think, or want about risks. Use techniques such as interviews, facilitated discussion</td>
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</table>

Say only what you want the media to repeat; everything you say is on the record.

Tell the truth. Provide background materials about complex risk issues.

Provide information tailored to the needs of each type of media. For example, provide sound bites and visuals for television.

If you do not know the answer to a question, focus on what you do know and tell the reporter what actions you will take to get an answer.

Be aware of, and respond effectively to, media pitfalls and trap questions.

Avoid saying “no comment.” Follow up on stories with praise or criticism, as warranted. Work to establish long-term relationships with editors and reporters.
<table>
<thead>
<tr>
<th>and monitoring reactions</th>
<th>groups, information exchanges, availability sessions, advisory groups, toll-free numbers, and surveys.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarifying the situation to help public groups to cope with the situation</td>
<td>Let all parties with an interest or a stake in the issue be heard.</td>
</tr>
<tr>
<td>Continuous monitoring of needs and perceptions of public groups</td>
<td>Let people know that what they said has been understood and tell them what actions will follow.</td>
</tr>
<tr>
<td>Ongoing monitoring of needs and perceptions of public groups</td>
<td>Empathize with your audience and try to put yourself in their place.</td>
</tr>
<tr>
<td>Acknowledge the validity of people’s emotions.</td>
<td>Emphasize communication channels that encourage listening, feedback, participation, and dialogue.</td>
</tr>
<tr>
<td>Recognize that competing agendas, symbolic meanings, and broader social, cultural, economic, or political considerations may complicate risk and crisis communication</td>
<td></td>
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</table>

### 3.2.2. Messages
Messages, tools and channels are other important elements in the management of communication. As in the case of stakeholders, the first stage is to evaluate the information is going to be disseminated. The goal is not just to disseminate any kind of new information we receive, but to evaluate if the information is going to help risk groups and other affected stakeholders to self protect and to minimize the effects of the crisis. There are five questions to take into account before deciding if an information should be released publicly (IHR Risk Communication Capacity: Transparency and First Announcement of a Real or Potential Risk from the CDC, 2010, p. 9).

a. Will the release of this information help the affected community protect itself?
b. Will it impact an economic sector?
c. Will it stigmatize a population?
d. Will it make the Government "look bad"?
e. Will it introduce potential legal liability?

While writing and disseminating messages during a health crisis, it is very important to take into account general aspects that might be shared by the stakeholders while building messages. Here we propose: the goals, the formal features, and the content of messages.

**Goals of messages**

- To convey information in order to take care of patients, prevent further cases. Said differently, to promote knowledge & facilitate decision-making.
- To promote coordination amongst institutional stakeholders.
- To activate reactions with the promotion of actions and procedures
Formal features of messages

- Messages must be spread fast and quickly.
- They have to be clear and simple. The information sent out must be accessible, coherent, accurate, consistent, easy to understand, repetitive and clear. To sum up, we call this ACCT information: Accurate, Consistent, Coherent and Timely. Use graphics and other pictorial material to clarify them.
- It is recommended to use less dramatic words, introduce numeric analogies and avoid acronyms and jargon. The level of certainty of the information should be indicated. The sender needs to use an accessible language easy to understand and remember. It is also positive to offer numeric data and to use acronyms, mnemonics or numerical “step-by-step” lists for aiding retention.
- It is very important to be repetitive, that is, to repeat periodically the same content through the same or different channels. This is important for the citizens to receive the messages in a clear way.
- They must be written in several languages. It is important to provide multilingual information on how assessment, healthcare and other support services should be accessed.

Content of messages

- Begin with clear, explicit objectives, such as providing information, establishing trust, encouraging appropriate actions, stimulating emergency response, or involving stakeholders in dialogue, partnerships, and joint problem solving.
• Personalize risk data. Use stories, narratives, examples, and anecdotes to make technical data come alive.

• Avoid embarrassing people. Respect the unique communication needs of special and diverse audiences.

• Express genuine empathy. Acknowledge, and say that any illness, injury, or death is a tragedy to be avoided.

• Avoid using distant, abstract, unfeeling language when discussing harm, deaths, injuries, and illnesses.

• Acknowledge and respond in words, gestures, and actions to emotions that people express, such as anxiety, fear, anger, outrage, and helplessness.

• Acknowledge and respond to the distinctions that the public views as important in evaluating risks.

• Use risk comparisons to help put risks in perspective; make sure those comparisons take into account the distinctions the public considers important.

• Identify specific actions that people can take to protect themselves and to maintain control of the situation at hand.

• Always try to include a discussion of actions that are under way or can be taken.

• Be sensitive to local norms, such as speech and dress.

• Strive for brevity, but respect requests for information and offer to provide desired information within a specified time period.

• Only promise what you can deliver, then follow through.

• Understand that trust is earned; do not ask or expect to be trusted by the public.
• Messages must be transparent and most important they must be true. Messages can never try to mask or to hide the real situation. Messages must included real, true information independently of the level of gravity-severity. As WHO points out (2005, p. 4), it is important to announce “the limits of transparency publicly and explain why those limits are being set” for preventing public and media from suspecting.

• The coherence must exist in all levels: European, National and Local

• It is important to update the messages with new information and this update needs to include the feedback received (e.g. questions or requests from population, mass media, etc…). The feedback can be produced in an individual or in a collectivistic way; anyway, it must answer the requests. It is important to establish a dialogue with the different stakeholders, above all, between the experts that are going to work as main sources of information (e.g. Health Authorities, Organizations and Professionals) and the rest of stakeholders (e.g. Mass media, patients, public). We should care about people and their reactions. They should have the chance to express their concerns, ask questions and receive accurate answers.

• It is important to promote bidirectional processes that allow the monitoring of the impact of information (e.g. how the messages are received, how public is interpreting information, etc.). It is basic that the Member States health departments are aware of how their public message campaigns are received and understood by the public and targeted audiences.
The message must be concrete and needs to avoid superficial information. The aspects we need to include in the messages are:

- Real gravity/severity of what is happening
- Where the risk situation is located
- Who can be affected by the crisis.
- What are we doing for solving the crisis. It is important to explain what is being done to detect any such virus and prevent its spreads.
- What are the causes of the situation.
- What is the predictable evolution of events.
- Where can the public/different stakeholders find more information through Internet, social networks, telephone numbers, health centers, etc.
- Preventive measures to the population (vaccination, personal measures or recommendations) and behavioral recommendations, paying special attention to risk populations. Messages directed to the public should include information about what the public can do to make themselves safer. The public needs to be able to assess necessary preventive measures and to feel confident that they are able to protect themselves against the health risk. Therefore, crisis communication needs to deliver information to support self and
response efficacy. Personal preventive measures are basic for promoting that the public takes responsibility for their own health. These fast and reliable messages about measures can include information about good personal hygiene, frequent temperature checks or restrictions on visiting patients in hospitals. The messages should be orientated to personal safety and public health so they must provide information about the effectiveness of recommended measures. We should explain the public all aspects of outbreak response and next steps.

Measures to the population are probably one of the most important aspects for citizens. In fact, the research developed by CRICORM (LMU, 2013) pointed out that this was one of the most important topics people was concerned about during the H1N1 crisis. Starting from this research, other recommendations while writing press releases and news (mass and social media) are:

- Health crisis information should provide detailed information about how to overcome uncertainties and the causes. It should combine fear appeals with self-efficacy messages. Other important topics need to be included in press releases and news are: consequences of the infection, infection treatment, causes of infection, consequences of treatment. Policy measures, its consequences, social consequences, or economic aspects should play a secondary role.
- It is not recommended to use a dramatic frame in the information but to appeal emotions including self-protection messages. It is positive to increase the
combination of fear appeals and self-efficacy enhancing information, emotionalization, and exemplars for illustrating in a clear way the main message.

- The most important news factors are transparency, objectivity and accuracy. Other elements (like celebrities, surprise, curiosity or conflict) should play no role (or at least a secondary role) in the media coverage when it comes to the respondents.

- Preventive measures and treatment need to be published together with warning messages. Messages should avoid alarming descriptions and sensationalism. On the contrary, they should increase citizen’s knowledge in relation with the concrete health crisis. Transparent communication should replace dramatic estimations.

- Emphasizing only threats-alarming without promotion of self-efficacy should be avoided. It is necessary to include reassuring information, the voice of experts and disclosure of uncertainty for increasing the intended effects on the population. The combination of these elements should be more effective in informing the public and influencing their prevention behavior.

- Authorities and institutions should pay more attention to risk groups and should consider them more in their messages. If special target groups shall be warned, these groups need to be addressed directly. However, it has been found that the content of press releases is not directly adopted by the media. Health ministries and agencies must take into account that for media companies some target groups can be more interesting and newsworthy than others (LMU, 2013).
• For young people, interpersonal public communications (like social networks, forums or blogs) are very important because the interactive nature of conversations improves the processing and learning of health information. The online discussion therefore promotes the learning and adoption of protective behaviors and can help to support crisis communication measures in public (Morgan, 2009).

3.2.3. Tools & Channels

About the tools and channels, taking into account the stakeholders and publics that are involved in the crisis, the CCO together with the crisis team needs to select what are the most appropriate channels and tools for the dissemination of messages. When managing a health crisis, it is necessary to combine several of the channels depending on the crisis. We need to be able to evaluate and monitor the different channels for checking if they are accomplishing the necessities/tasks of the crisis.

Some of the channels recommended according to the goals of this stage are:

• The coordination of stakeholders facilitates decision-making and coordinated intervention. For this goal, institutional stakeholders communications are recommended (healthcare professionals, NGOs, internal health bulletins and audioconferences and briefings). While coordinating stakeholders, other 2.0 channels, like geoweb, mobile media and web platforms are also recommended.
- **Internal communications** ensure fluid access and availability of information amongst stakeholders, facilitating synchronous secured communication during crisis duration. Without any doubt, internal health bulletins, briefings and audioconferences, mobile media and web platforms are appropriate tools for internal organizational purposes.

- **External communications with citizens** are necessary for spreading actual and relevant information about crisis evolution, appropriate actions and safe behaviors. For doing so, printed publications and traditional media are going to be some of the main sources of information. About 2.0 channels, content sharing (specifically pictures, podcasts and videos-youtube), content gathering (syndication and rss), content display (blogs), geoweb, and mobile media are main channels and resources for informing and communicating with citizens. About social networks, there are some relevant experiences – like Twitter Alerts- using Twitter to communicate publics in crisis scenarios and to monitor and assess social network based communications in these contexts and situations.

- **External communications with the media** are another important objective of the management of the crisis. It consists in communicating to mass media information, evaluation and recommendations about crisis evolution, available help and safety. Here, reports, press conferences, traditional media, outdoor advertising, and free phone lines are key channels for disseminating messages to a wide audience. Related with 2.0 channels, pictures, videos-youtube, blogs, geoweb, social networks and web platforms are
recommended channels for maintaining a successful communication with the media.

As we have already developed in the table number 1 (section 1.3, channels and tools), for sending information, promoting coordination and provoking a reaction some channels are more appropriate than others. For information purposes, the most of the channels are appropriate, while for the coordination of stakeholders, only institutional stakeholders communications and intranets or websites are recommended. The reaction of stakeholders is going to be more easily accessible through leaflets, press conferences, traditional media, free phone lines, health care professionals, NGOs, websites, social media and blogs.

3.3. Post crisis

Postcrisis stage technically starts when the reason (cause) that has provoked the crisis finishes. In case of epidemics, the end of the crisis happens when health authorities consider that the risk situation/alarm is gone so there is no real risk for population. During this stage, it is necessary to monitor the measures and actions promoted during the crisis and to make an evaluation of the strengths and the weaknesses. In this stage, the purpose/goal of communication strategies is to recover the trust and image. There are two key aspects during the post crisis:

- It is necessary to define when a crisis is done and to establish channels with the stakeholders involved in the management of the crisis.
- We need to develop a strategy with three basic elements:
To research, evaluate and analyze the image and trust of public once the crisis is gone.

To research and evaluate the effectiveness of the communication strategies used during the crisis.

If we detect problems or flaws (questions, distrust, concerns…) among publics, we need to develop plans and campaigns that overcome the problems.

About the attitudes and measures that must be implemented and promoted by the crisis team, the following table summarizes some best practices:

<table>
<thead>
<tr>
<th>Targets</th>
<th>Measures</th>
<th>Best practices</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General considerations for the sources of information</strong></td>
<td>Supporting reflection about what has been done</td>
<td>Carefully evaluate communication efforts and learn from mistakes.</td>
</tr>
<tr>
<td></td>
<td>Supporting evaluation and learning about communication in the organization and within the response network</td>
<td>Share what you have learned with others</td>
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<tr>
<td></td>
<td></td>
<td>Evaluate how has been the flow of information between European, national and local levels</td>
</tr>
<tr>
<td><strong>Relationships with mediators</strong></td>
<td>Evaluation and conclusions for the future via media and public debate</td>
<td>Evaluate media coverage</td>
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<tr>
<td></td>
<td></td>
<td>Evaluate journalists and other professionals perceptions</td>
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<td></td>
<td></td>
<td>Make public your findings</td>
</tr>
<tr>
<td><strong>Interaction with receivers</strong></td>
<td>Supporting evaluation and learning about communication with and</td>
<td>Evaluate risk groups responses and situation before and after the crisis</td>
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</table>
As we have seen in previous sections, the goals of this stage can be related with the use of specific channels:

- **Audit stakeholders’ reputation & trust** implies the evaluation of the state of stakeholder’s reputation and trust after crisis intervention. For achieving this goal, campaigns and healthcare professionals are recommended channels, as content sharing, content gathering, blogs, social networks and mobile media.

- **Crisis follow-up (Internal communication)**, ensures fluid access and availability of information and decisional coordination amongst stakeholders in the crisis aftermaths, focusing on the management of crisis effects and consequences. For doing so, audio conferences, briefings, internal bulletins, social networks, mobile media and web platforms seem appropriate tools.

- **Crisis follow-up (external communication with citizens)** spreads actual and relevant information about crisis consequences and effects, help and support systems or institutions, appropriate actions and safe behaviors. Traditional media, campaigns, and the most of 2.0 channels are appropriate media for this goal.
• Crisis follow-up (External Communication with the Media). This means to communicate to mass media information, evaluation and recommendations about crisis aftermaths (consequences and effects) and make clear the role of authorities and other stakeholders during crisis. For the achieving of this goal, traditional media and campaigns are again appropriate channels. About the 2.0 tools, content display and social networks are the most outstanding for this objective.

Tables 7 and 8 summarize the use of channels in the three stages we have developed in this section:
Table 7. Stages and traditional channels

<table>
<thead>
<tr>
<th>PRINTED PUBLICATIONS</th>
<th>CONVENTIONAL MEDIA &amp; COMMS</th>
<th>INSTITUTIONAL STAKEHOLDER COMMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaflets, flyers</td>
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<tr>
<td>Bulletins</td>
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<td>Report</td>
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<td>Press conf</td>
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<tr>
<td>Traditional media</td>
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<tr>
<td>Campaigns</td>
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<tr>
<td>Outdoor advertising</td>
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<td>Free phone lines</td>
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<tr>
<td>Audio-conf/ briefings</td>
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<tr>
<td>Healthcare professionals</td>
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<tr>
<td>NGOs</td>
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<tr>
<td>Internal Health Bulletins</td>
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</tbody>
</table>

NO-CRISIS

- Stakeholders’ Reputation & trust
- Preparedness
- Prevention

CRISIS

- Coordinate stakeholders
- Internal Communications
- External Communications: Citizens
- External Communications: Media

POST-CRISIS

- Assessment of Crisis Comm Management
- Audit stakeholders’ reputation & trust
- Crisis follow-up: Internal comm.
- Crisis follow-up: External Comm: Citizens
<table>
<thead>
<tr>
<th>Crisis follow-up:</th>
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<tbody>
<tr>
<td>External Comm: Media</td>
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### Table 8. Stages and 2.0 channels

<table>
<thead>
<tr>
<th>NO-CRISIS</th>
<th>CO-OP</th>
<th>POST-CRISIS</th>
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<tbody>
<tr>
<td>Stakeholders’ Reputation &amp; trust</td>
<td></td>
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<tr>
<td>Preparedness (2)</td>
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<td>Prevention (3)</td>
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<td>Coordinate stakeholders (4)</td>
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<td>Internal Communications (5)</td>
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<td>External Communications: Citizens (6)</td>
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<tr>
<td>External Communications: Media (7)</td>
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<tr>
<td>Assessment of Crisis Comm Management (8)</td>
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<tr>
<td>Audit stakeholders’ reputation &amp; trust (9)</td>
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<tr>
<td>Crisis follow-up:</td>
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<table>
<thead>
<tr>
<th>CONTENT SHARING</th>
<th>CONTENT GATHERING</th>
<th>CONTENT DISPLAY &amp; PUBLISHING</th>
<th>GEO WEB</th>
<th>SOCIAL NETWORKS</th>
<th>MOBILE MEDIA*</th>
</tr>
</thead>
<tbody>
<tr>
<td>e-Cards</td>
<td>Pictures</td>
<td>Podcasts</td>
<td>Video</td>
<td>Syndication</td>
<td>RSS</td>
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<td>aggregators</td>
<td>Aggregators</td>
<td>Badges</td>
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<td>Widgets &amp; plugins</td>
<td>Blog s</td>
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<td>Facebook</td>
<td>Twitter</td>
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*Media includes e-Cards, Pictures, Podcasts, Video, Syndication, RSS aggregators, Badges, Widgets & plugins, Blog s, Facebook, Twitter.
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<tr>
<th>Internal comm. (10)</th>
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<td>Crisis follow-up:</td>
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<td>Citizens (11)</td>
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<td>Media (12)</td>
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Finally, the dissemination of messages during this stage needs to include information about the control of pandemic; it must calm down population and announce when or if the exceptional measures have been already cancelled. It is also important to give feedback to citizens, the media or other stakeholders and to acknowledge citizens, the media, health professionals and so on their efforts during the crisis.

4. Dissemination to stakeholders

The main proposals of the guidelines we have developed in this report were disseminated to some of the key stakeholders identified by the Wp4 of CRICORM project. The key stakeholders of the European Union contacted were: Health professional associations; Health institutions / authorities / networks; Patients and consumers associations; the Media. They belonged to European, National and local levels. We contacted stakeholders from Spain (133 stakeholders), Portugal (56 stakeholders), Italy (82) and Germany (500).

Since the guidelines were a little bit long, we decided to send a summary. After reading the summary, we encouraged them to fill a short survey for the evaluation of the main proposals of the guidelines developed by CRICORM. We explained in the email that if they were interested, we would send them the complete report.

These are the twelve questions included in the short questionnaire filled on line:

1. Name of the Organization (company or institution) you belong to:
2. Are you interested in receiving the full proposal of guidelines developed by CRICORM?

3. E-mail address to send the full proposal of European Guidelines in Health Crisis Communication.

4. Evaluate from 1 (disagree) to 5 (completely agree) the following statement: “I think that the summary includes the most important aspects that need to be considered in the management of a health crisis”.

5. What other aspects would you include in the European Guidelines that have not been mentioned in the summary we have sent you?

6. Evaluate from 1 (disagree) to 5 (completely agree) the following statement: “Me and my organization are interested in considering some of the aspects included in the proposal of CRICORM”.

7. Evaluate from 1 (disagree) to 5 (completely agree) the following statement: “The organization I belong to is ready for the management of health crisis communication”.

8. Evaluate from 1 (disagree) to 5 (completely agree) the following statement: "The organization I belong to has enough material and human resources for putting into practice the ideas and approaches proposed by CRICORM”.

9. Evaluate from 1 (disagree) to 5 (completely agree) the following statement: “The organization I belong to has already implemented the use of 2.0 tools during health crisis”.

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10. Evaluate from 1 (disagree) to 5 (completely agree) the following statement: “I believe it should be a greater coordination at the European level (Member States) when facing health crisis”.

11. Evaluate from 1 (disagree) to 5 (completely agree) the following statement: “I think that contacting NGOs for communicating with risk groups is a useful proposal”.

12. Which other actions would you propose for contacting risk groups?

    Just 18 stakeholders filled our online questionnaire. 16 stakeholders were from Spain, 1 was from Portugal and the other one from Sweden (even when the guidelines were not disseminated to this country). These are the names of the organizations whose workers answered the online questionnaire:

    Spain

    - Cicero Comunicación
    - Infopress
    - Planner Media
    - Llorente y Cuenca
    - Hospital Clínic de Barcelona
    - Acta Sanitaria
    - Instituto de Salud Carlos III
    - Asociación Española de Comunicación Sanitaria
31,2% of the stakeholders belong to the group of journalists and media. Another 31,2% of the stakeholders belong to a health organization. 25% of the stakeholders work for a health authority and, finally, 12,5% of the stakeholders belong to a research institute or network.
In general, the respondents evaluated very positively our proposal. They recognized that the most important aspects of the management of a crisis were included. They also pointed out that CRICORM’s guidelines were a useful tool for their organizations. Their perceptions about their organization were also satisfactory since they believed that their organizations are ready for facing a health crisis and they have enough resources for managing crisis communication. Let’s see these results in a more detailed way.

The 68,7% of the stakeholders who completed the online questionnaire evaluated with 4 the idea that the summary of the European guidelines we sent them included the most important aspects that need to be considered in the management of a health crisis. The 18,7% evaluated the statement with 5 and the 12,5% of the respondents with 3.

Between the aspects that they would include in the guidelines that where not mentioned in the summary, they highlighted the following aspects: the post - crisis stage.
and the image recovery; the importance of differentiating objective risk and perceived risk; and the necessity of giving more instructions for media coverages. They also proposed the following suggestions:

- To include information directly related to health crises and previous crisis experiences in the sense of what works and what doesn’t.
- To take into account the results of scientific studies that analyzes communication strategies.
- To give a greater importance to the beliefs and risk perceptions of the public.
- To take into account that there are groups of people that have no access to 2.0 tools.
- To maintain a fluent communication with WHO and other international institutions.

These aspects were not included in the summary because of a space limitation. However, all these aspects have been widely discussed in different CRICORM documents, like in Wp4’s report (LMU, 2013) and in this report.

Most stakeholders were interested in considering the aspects included in the summary of the guidelines. 43.7% of the stakeholders evaluated CRICORM’s guidelines with the grade number 4, and 31.2% with the grade number 5. The rest of them evaluated their interest with 3.
The 35.5% of the respondents considered that the organizations they work for are very well prepared for the management of health crisis communication since they have graded this aspect with 5. The 18.5% of them believed that their organizations are well prepared: they assigned 4 to the statement. 25% thought their companies or institutions were not prepared for managing a crisis. Finally, 12.5% and 6.2% believed they were bad or very bad prepared respectively.

Half of the respondents (31.2% assigned 5 and 18.7% assigned 4) believed that the organization they belong to has enough material and human resources for putting into practice the ideas and approaches proposed by CRICORM in the summary. Almost
the other half (43.7%) rated this aspect with 3, so they thought that they do not have enough material and human resources. Finally, 6.2% of the participant evaluated this aspect with 2.

More than half of the respondents highlighted that their organizations had already implemented the use of 2.0 tools during health crisis. They rated this statement with 5 (37.5% of the participants) and 4 (25% of the stakeholders). 18.7% assigned 3, 12.5% 2 and 6.2% graded this aspect with 1.

Almost all respondents completely agree with the statement that said “it should be a greater coordination at the European level when facing health crisis”. They assigned 5 and 4 respectively to this statement.
About the statement, “Contacting NGOs for communicating with risk groups is a useful proposal” where similar to the previous one. The most of the respondents completely agree or agree (56.2% and 31.2%) with it. They valued it with 5 and 4 respectively.

The last question the stakeholders had to fill was an open one. We asked for them to suggest other ways for contacting risk groups apart from the ones mentioned in the guidelines summary. They proposed the followings:
- Strengthen collaboration networks or create specific agencies to address the needs of these groups. One of the stakeholders spotlighted the usefulness of creating a European Network of Health Communication. In the same line, another suggested to establish a direct channel of communication with EFSA (European Food Safety Authority) in order to increase the level of information related with a concrete risk group. A third participant pointed out the importance of collaborating with interstate institutions and agencies of the European Commission such as EFSA (European Food Safety Authority), ECDC (European Centre for Disease Prevention and Control), EMA (European Medicines Agency) and the United Nations such as UNAIDS (United Nations AIDS), WHO (World Health Organization), UNFPA (United Nations Population Fund), etc... They also proposed to train Social Services staff to specifically work with these groups.

- To establish fluent communication with key stakeholders such as the internal group leaders.

- To develop special actions with patient’s associations.

5. Conclusions

This proposal of guidelines is based on the existing documents about the management of health crisis communication within the European Union, on the scientific literature and also on previous analysis on A/H1N1. We have developed several findings. We are going to focus on those related with 1. stakeholders and 2. messages and tools. We will finish this section with some considerations about future
research lines that need to be implemented in the management of health crisis communication within the European Union.

Firstly, we have highlighted the importance of coordinating and training stakeholders. Here the Chief Communication Officer must accomplish important tasks for centralizing communicative practices among different stakeholders in all levels (European, national, local). We have classified stakeholders according to their role in the communication process (sources of information, mediators, receivers), something that has allowed us to specify measures and best practices in each stage (no crisis and prevention, crisis, post crisis). At this point, for contacting risk groups, we have proposed the necessary specialization of messages and also we have included a list of some of the most important NGOs that must be contacted before, during and after health crises. We have also highlighted the importance of improving the communicative culture of stakeholders. On the one hand, it is necessary to improve training and the perception among the sources of information that real, that is, dialogical, communication is necessary and basic for the management of health crisis. On the other hand, journalist, bloggers and other professional communicators must be included in training actions. It is necessary to improve the specialization of journalists in health issues for increasing the flow of information among stakeholders. Finally, we also need to consider citizens. Citizens must be trained in the use of health information sources, including a necessary digital literacy in 2.0 channels (health literacy).

Secondly, we have paid special attention to the use of channels and also 2.0 tools. This was one of the main flaws detected in the current European guidelines. For
overcoming this limitation, we have proposed specific guidelines for the use of tools, with special emphasis in 2.0 channels. The use of certain channels has been related with the general features of messages (open, close, objectives, etc.). Another important finding has been the recommendation of prioritizing specific tools and channels according to the stage of the crisis.

We would like to finish this report with future research lines that could improve the management of health crisis in the future. It would be necessary to develop more holistic approaches to the management of crisis. These holistic approaches would complete the current guidelines orientation, that are based on universal and general assumptions, a positivist orientation that needs to be completed with critical and interpretive approaches to the analysis of health communication. The use of qualitative methodologies and the analysis of how people use information are basic aspects that need to be developed during the following years.

A holistic approach to the management of health crisis within the European Union should also take into account cultural differences and similarities among EU member states. This cultural approach should be used before, during and after the crisis with qualitative methods that provided a flexible management of communication.

Finally, a cultural approach to health crisis would be a way of improving communication culture within the European Union, an ambitious goal that could reinforce and consolidate not just the management of health crisis, but also the European identity.
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