Research Article



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Power to Health Reporters: Health Literacy as a Tool to Avoid Pressures from News Sources

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Kevwords

Literacy · News sources · Legionnaires' disease · Journalism · Health

Abstract

The second biggest Legionnaires' disease outbreak worldwide occurred in Portugal in 2014. It was classified by the WHO as a "great public health emergency," and it was subject to a unique media coverage in Portugal. The media coverage of this outbreak lasted for 2 weeks, which is not very common in similar cases, and it was characterized by the control of information by official sources. These were put together in a joint task force that disseminated all information. Nonetheless, they did not generate a hegemonic discourse which is usually characteristic of power elites. That happened mostly due to the promotion of health and risk literacy. Through infographics, descriptive maps, and questions and answers, the media were able to generate an alternative discourse to that of official sources. That was the basis of a unique media coverage.

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Poder para os repórteres da saúde: a literacia em saúde como uma ferramenta para evitar as pressões das fontes de informação

Palavras chave

Literacia · Fontes de informação · Legionella · Jornalismo · Saúde

Resumo

Foi o segundo maior surto de Legionella registado a nível mundial, classificado pela Organização Mundial de Saúde como "uma grande emergência de saúde pública," e foi alvo em Portugal de uma cobertura noticiosa ímpar. Concentrada primordialmente em duas semanas, algo atípico para casos como este, a mediatização caracterizou-se por um grande controlo das fontes oficiais que, desde o primeiro momento, se constituíram numa *task force* a partir da qual toda a informação era canalizada, mas soube libertar-se de uma narrativa hegemónica que as elites do poder normalmente impõem. Isso fez-se, acima de tudo, pela promoção de uma literacia da saúde ao serviço da

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compreensão daquilo que eram os perigos deste surto. Em infografias, mapas descritivos, em textos em forma de pergunta e resposta, os jornalistas conseguiram criar um outro discurso paralelo ao das fontes oficiais e, com isso, criaram uma cobertura única.

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Introduction

On November 8th, 2014, the Portuguese press started its coverage of the Legionnaires' disease outbreak that was then in the beginning. Their news frame highlighted the 27 people who had been hospitalized, and that was the origin of many titles in the newspapers that same day. On the following day, the outbreak was "promoted" to the front pages, where it remained for about 2 weeks. People soon realized that this was a serious outbreak. This perception became clearer when the World Health Organization declared this "a great public health emergency." All communication was controlled, and this was only possible because both the Ministry of Health and the Directorate-General of Health were in charge of communications with the press. The Health Minister and the Director-General of Health themselves would talk daily with the media. Journalists had access to the same news sources, which posed a challenge when trying to find different news frames. They managed to do that while explaining what was at stake. The media promoted health literacy, which is essential when covering public health issues and is reflective of quality health journalism.

The Legionnaires' disease outbreak promoted an intense media coverage in the Portuguese media due to a news wave supported by three news factors: counting of the number of deaths/infections; search for accountability for the outbreak; and dissemination of the perceptions of those affected by the outbreak.

News frames were essentially supported by the first two factors. In 2 weeks, three of the main Portuguese daily newspapers (*Público*, *Diário de Notícias*, and *Jornal de Notícias*) published 81 news pieces, which represents almost two texts on the outbreak daily.

During this outbreak, journalists first chose to speak to official sources. Only afterwards were citizens given a voice in news features in order to give a sense of what the population was going through. News features are usually long news stories that have background elements and extensive research. While official sources try to convey tran-

quility, citizens are usually restless and seem to be worried about this public health issue.

As soon as this outbreak started, journalists seemed to be concerned with either counting the number of hospitalized and dead people, or with identifying responsibilities. Health authorities provided data on the first frame, guaranteeing that no significant information was being held from the public. The origin of the outbreak was potentially controversial, but the problem was solved as soon as authorities announced that the case was protected by "justice secret." This is a legal procedure in Portugal that forbids the publication of information pertaining to ongoing investigations.

All these constraints pushed journalists into finding alternative news frames, resulting in the promotion of health literacy. This was accomplished through the publication of infographics that tried to explain the complexity of the outbreak, through questions and answers which addressed people's doubts, and through glossaries explaining complex concepts. Health literacy may be an effective way of tackling poor health outcomes and social inequalities. In fact, the mass media have the power to help people dealing with their own health by improving health literacy levels through the explanation of difficult health notions and concepts. In the end, high levels of health literacy eventually result in a more informed population, and one which can make good use of medication and healthcare services.

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Literature Review

Principles of Quality Reporting

Journalism quality has been widely discussed within communication sciences, either to state the impossibility of strict measuring due to quality being immaterial [1] or to present evaluation models [2, 3], or even to explain its growing importance in citizenship [4]. Even though authors who define journalism quality may diverge in their proposals, they agree in certain distinctive features: diversity of news themes; up-to-dateness of news, accuracy and depth of issues; sophistication in the media coverage of reality.

Quality reporting is a complex, diverse, and sociocultural contextualized reality [5]; hence, it is not confined to what is covered. Instead, it reflects whatever comes be-

fore (legal and regulation procedures, viability of economic media groups...) and after (consequences for news sources who become news, public impact...) the news production process. It has a strong impact on the quality of the public space where news content is conveyed, and it generates a structural duality between media and society, which was clearly highlighted by Jürgen Habermas.

Among the first proposals to define quality reporting, it is worth highlighting Merril's [6], for whom writing accuracy, journalists' impartiality, financial stability of newsrooms, and social concerns towards what becomes news will always be matters to bear in mind in the definition of the concept. Half a century later, these proposals are still valid and have been replicated by those who have studied this theme. In the 1980s, Burgon et al. [2] reaffirmed these objects, adding the importance of perfecting news contents. In the 1990s, Bodle [7] contributed with some important variables, such as the balanced use of news sources, the introduction of graphics and the thoroughness in media coverage. At the beginning of the 21st century, Patterson [8] highlighted the care that one should put in all processes of journalistic work, such as the search for information, the edition of news pieces, and the transmission of news contents. A few years later, Gladney et al. [9] added the dialogue with the target audience, stressing the importance of meeting the interests of the information consumers.

Even though one can soak up contributions written by several authors throughout different times and places, it is important to keep in mind that quality reporting should be thought in context: by looking at the event/social field in the news, at the information given by news sources, at the editorial lines of journalism projects, or even at the resources within newsrooms. Furthermore, there are factors that weigh in and influence the field of journalism, such as the State (as legislator and regulator), the market, and society. From our point of view, society should be regarded in a special way, especially when one understands journalism as a public service. Just like other authors, such as Merril, Patterson, or Wolf, we too stand for a journalism that serves society, providing it with credible and relevant information allowing for a better understanding of the world and to act critically in the public space. And this is also the path for quality reporting.

The Power of Official Sources

Journalists have a tendency to follow those who represent power structures, which in most cases are official sources such as public officials (either elected or appointed). When they talk to the media, they are talking on be-

half of a given public institution or company. Several authors have underlined the media's preference for official sources [10–13].

Official sources generate a consensus that seems to spare journalists from talking to other sources. They are open and reliable sources who provide clear and concise information. In positive situations they become proactive in communicating their stories. Official sources are usually very careful when conveying information to the media and they only talk about what they perceive to be positive. Whenever they have a trustful relationship with journalists, they may give them more information (off the record or background information). Since journalists are very dependent on official sources, they are often subject to criticism, such as media institutions being accused of working for the establishment [13]. In Portugal, the researcher Estrela Serrano [14] argues the exact same thing.

The media are attracted to official sources because they have a solid reputation and are known to add credibility and prestige to the news stories. Ultimately, journalists are evaluated based on their contacts and sources.

Besides its power of influence, the political field is very interesting to the media because it involves a game. Any story will most likely have a follow-up, since statements from the left-wing, for instance, could provoke a statement from the right-wing. Ideological differences will promote this need to come public. Moreover, political actors believe they need to talk to the media because that will guarantee them visibility in the media public space. A politician knows his/her political prestige is greatly due to his/her media visibility.

Official sources, and specifically those from the political field, engage in communication strategies that assure them a positive media coverage. They do that through the promotion of pseudo-events, sound bites, or by maintaining close relationships with journalists. Gieber and Johnson [15] analyzed the role of both journalists and news sources in the media coverage of local politics. They highlight three types of relationships:

- Independency: there is a distance between those who give the information and those who reconstruct it;
- Cooperation: the news source looks for a given information being published and journalists need that information in order to do their jobs;
- News sources' power: the source has control over the journalists' work.

It would be ideal to adopt one of the two first behaviors, but that is not always possible. However, journalists should be wary of the visibility given to official sources. By giving too much credit to official sources (especially politicians), journalists are filling the media public space with a restricted group of people and simultaneously underestimating all other sources (mainly specialist sources and the common citizen). And this is something journalists are not always capable of controlling given newsrooms constraints. Indeed, worldwide journalism is going through a crisis which is reflected in a lack of time, financial resources and reporters, for instance. As a result, journalists do not always have the time or the opportunity to talk to several sources, which may compromise the plurality of news sources that good journalism requires. Instead, they rely on official sources, which lend their stories more credibility and are more available to the media due to their privileged access to the media (a consequence of their status) and because they usually work with media relations specialists.

Health Literacy as a Tool to Deal with Organized Sources

This was the second largest outbreak of Legionnaires' disease worldwide and it resulted in the death of 14 people in a short period of time. More than 300 people were admitted in several hospitals, and the World Health Organization declared this outbreak "a major public health emergency." In spite of that, this outbreak did not promote an extensive media coverage, neither did it encourage public discussion. Nonetheless, the Portuguese press did cover the outbreak and helped lay people in the prevention of risk behaviors. This was the outbreak that promoted the least social alarm during the last decade. According to health reporters involved in the coverage, this was due to a centralized, yet not silent, communication policy, as well as the media's promotion of health literacy.

Health communication is recognized by several authors as a fundamental public health tool [16, 17]. Therefore, health communication has become an established field within public health [17] and there is a broad awareness of the scope of health communication and its strategic areas. Most of the research comes from the United States, where health communication as an academic field dates back to the 1970s. However, the Portuguese panorama is considerably different, and it could be argued that the importance of such discipline is yet to be recognized. This same reality is stated by Annegret F. Hannawa and her colleagues [18], who say that "to date, health communication research has mainly been represented by a United States-dominant perspective," even though it is "a topic of international interest."

Despite this, it is true that both health and medicine are a prominent element in the contemporary news agenda. Indeed, media can be perceived as a public health policy tool [19]. And even though reporters are usually not up to the idea of media being used to prevent cancer, for instance, health journalism does promote different attitudes amongst journalists [19]. Although media can contribute to public health, it is worth keeping in mind that both disciplines have different goals. And this may constitute a problem, both for health educators using media to reach the public and for journalists covering health issues [20].

From a public health perspective, media can influence public perceptions towards the severity of an illness, the risks of becoming ill, and so on [17]. Media coverage of diseases, for instance, has the power to reduce stigma and promote attention towards underdiagnosed or underrepresented diseases. An extensive study of health in the news promoted by the British King's Fund defends "the greatest improvements to the health of the nation are to be gained not merely through advances in health care, but through advances in public health" [21]. The public health approach recognizes that the evaluation of health behaviors and outcomes has to take into account not only health care itself, but also a series of health determinants [22], where health literacy is included. Health literacy is the ability to recognize, organize, and talk about health information [23].

Indeed, the field of health literacy has adopted a main strategy to tackle low literacy levels: to simplify health and medical information [23]. The mass media have the power to improve or to reduce health literacy, by conveying complex messages or through the oversimplification of health concepts [23].

A group of researchers [23] defends that people want and need health information, especially when they or their relatives are ill. Such a need is independent of language or culture, since health literacy does not seem to influence people's interest in health information [23]. However, research seems to indicate that health literacy levels may influence individual health outcomes [24]. Therefore, poor levels of health literacy may contribute to a wrongful use of medication and healthcare services and to a bad management of chronic diseases, promoting bad health outcomes and social inequalities [23]. A recent study by the Australian researcher Kate Holland and her colleagues reinforces the (social) role of news media "in reporting and portraying emerging infectious diseases, such as 'mad cow' disease, avian influenza and, more recently, the H1N1 influenza or 'swine flu' pandemic" [25]. And although journalists are used to being held accountable for their reporting, their activity is even more scrutinized during these epidemics, as was the case in the recent outbreak of Legionnaires' disease in Portugal.

Methods

This study aims to analyze the Portuguese media coverage of Legionnaires' disease outbreak of 2014. We analyzed all the Legionnaires' disease-related news published in four national newspapers: *Público, Jornal de Notícias*, and *Diário de Notícias* (daily newspapers) and *Expresso* (weekly newspaper). Our sample is nonprobabilistic, and we chose these newspapers because they have different periodicity and editorial lines. We analyzed the main sections of these newspapers and left aside op-eds. An op-ed is short for "opposite the editorial page" and is a written piece which expresses the opinion of an author who is usually not affiliated with the publication's editorial board. Our period of analysis was the month of November 2014 and is justified by the outbreak itself.

We then conducted a quantitative analysis based on descriptive statistics, through the data analysis software SPSS. We studied the following variables: year of analysis, date, newspaper, title, disease, news genre, theme, time of the news, size, place of the news, presence and number of news sources. As for the news sources' analysis, we were interested in knowing who they were and what their job was. In order to do so, we looked for the following variables: presence/absence of news sources; number of quoted sources; geographical place of the source; sex; identification; status; and medical specialty.

This quantitative analysis provided a complete overview of the Legionnaires' disease outbreak. Afterwards, we conducted a qualitative analysis through interviews with the reporters who covered this outbreak within the analyzed newspapers. We interviewed 8 reporters, whose answers were emailed to us. Our questions were:

- What do you think was the main obstacle in covering this outbreak and what was helpful to the media coverage?
- The Legionnaires' disease outbreak did not make it into the political debate, even though it was a major outbreak. Why?
- Two weeks after its beginning, the outbreak disappeared from the front pages. This was also the moment when responsibilities were appointed. Why?
- During the coverage of this outbreak, do you think reporters promoted social alarm or did they promote health literacy? Why?

These interviews, together with the quantitative analysis, would help us find some different news frames, and the reporters' answers would guide us through the news building process on the Legionnaires' disease outbreak.

Results and Discussion

A Political Task Force in Control of the Outbreak

The first news on Legionnaires' disease was published on November 8th, 2014, and journalists chose to prioritize the high number of people admitted to the hospitals (27 victims). The outbreak began on a weekend, a period when typically official sources are less available to talk with the media. However, this was not the case with Legionnaires' disease.

Soon after it started, health officials put together a task force composed by both the Health and the Environment Ministers, the director-general of health, and those responsible for water quality. Their job was to monitor the events and to convey what they considered to be relevant information, since they had the power to decide what would become public.

Journalists believe that this quick and effective organization of news sources made it easier and at the same time more difficult to work. On the one hand, it made powerful sources available to talk with the media; on the other hand, the establishment of a task force made it difficult to access different sources. There were no sources outside that official group. Therefore, there was no controversy or public debate around the subject. This was probably appreciated by political authorities, because it kept the criticism away. Indeed, the health and environment ministers were never subject to disapproval from political opponents and soon there was no pressure to help the victims or their families.

But 6 months after the beginning of the outbreak, newspapers revealed that "victims await outcomes." During that period of time, there were 161 crime complaints against unknown people that were still waiting for reply. The courts of law did not conclude the investigation and compensations were yet to be defined (*Jornal de Notícias*, May 9th, 2015). Hence, the media informed people about the outbreak and prevented social alarm, although the absence of controversy around this outbreak was no help to the victims, namely when it came to giving financial amends. When Portugal was hit by another Legionnaires' disease outbreak in 2017, the media announced that victims from the previous outbreak were still waiting to be assured (*Jornal de Notícias*, November 9th, 2017).

Several hospitals who received victims of Legionnaires' disease arranged to talk to the media. Also, the Health director-general made himself available to provide further clarifications. One of the health reporters who worked this case recognizes that "the clinical director (of one hospital where the victims were taken) explained

right away that water consumption was not a potential contaminator and he calmed people down."

It was clear that sources were available to talk to the media, but soon they were instructed not to. This was a consequence of a communication strategy organized by official sources, the above-mentioned task force. This outbreak was dealt with by the government itself, and ministers would participate in press conferences with the media.

When we asked journalists what made their jobs easier during this outbreak, most of them said these encounters were essential to the information flow:

"We knew everyone would get access to the same credible and reliable information, and that is very positive."

"In some moments, official information was released through press conferences instead of press releases. That made our job easier, since the Directorate-general of health is skilled in communicating during these outbreaks."

"I find it relevant that health authorities did not try to hide the truth."

Other reporters argue their work was easier due to the "trust relationship" with certain sources and their availability to "deconstruct health messages whenever they were authorized to do so."

In their contact with official or specialized sources, journalists would always face the organization of news sources. Moreover, they were always careful in maintaining public order through communication.

Indeed, by putting together a group of official sources who would strategically inform the media, the government controlled public information. Nonetheless, journalists complained about the difficulty in promoting alternative news frames. That is the most common argument used by the interviewed reporters:

"Health authorities would not release much data and the director-general of health, who at first was trying to be enlightening, became less talkative."

"The Government promoted a centralized information operation through press officers, which is understandable within a serious public health situation. But they went too far on information restrictions, by silencing everyone involved and releasing few data."

"One of the biggest constraints had to do with the centralization of information. Despite their efforts, the directorate-general of health could not attend all media solicitations in time."

"The Ministry of Health ordered total contention in messages, centralizing the management of all that could, or could not, be said to journalists."

There was a suspicion of an environmental crime around this event, and this promoted criminal investigations. Due to the Portuguese penal code, this outbreak was involved in a proceeding called justice secret. This

means that news sources are not allowed to talk about the case, and journalists cannot cover anything related to that. These procedures were a constraint to the news coverage of the outbreak, namely the news frame related to the identification of people responsible. Interviewed journalists recognize this as a major obstacle to the media coverage:

"It was not easy to have access to the suspects: from what I can recall, there was only one company where I could get, even though I was not allowed to enter. Two of the other suspect companies would not pick up the phone or answer to any emails."

It is relevant to notice that when responsibilities were found, the media lost interest in this outbreak. The media suddenly gave away the coverage of the outbreak on the very same day the ones that have caused it were identified. Indeed, that day the former Prime Minister José Sócrates was arrested on charges of corruption and expectedly this fact became the focus of the media and replaced the media coverage of Legionnaires' disease for months. Even though the origin of the outbreak was found, there was no compensation for the victims and journalists did not push for more outcomes.

Do Journalists Generate Social Alarm or Promote Health Literacy?

During 2 weeks, Portuguese journalists covered the outbreak and tried to explain all the events, namely whether it was safe to consume water. This was a central element in the news coverage, since in the beginning there was a suspicion that this could be a source of contamination. Newspapers published texts, maps and infographics in order to explain what Legionnaires' disease is, how the contagion happens, who is more at risk, and what the treatment is. They often published repeated information, though.

Legionnaires' disease is not a common infection, and it is not widely known. There were several cases of infection and the outbreak's source was unknown, which created fear amongst the population. In situations like this, media can either be promoters of social alarm or contribute to calming people down. During this outbreak, the Portuguese press stood by the second role, and promoted peacefulness around the outbreak.

By that time, almost every edition of the analyzed newspapers explained the outbreak to lay people and helped in recommending the most adequate behaviors. Furthermore, official news sources helped in creating a pedagogical environment around Legionnaires' disease outbreak. Even the health director-general made himself

Table 1. News genres in the media coverage of Legionnaires' disease

News genres	%
News	73.5
News feature	24.1
Interview	2.4

available to inform people. There was a fear of public panic, and so it was essential to provide information. Political authorities made every effort to convey messages that showed the situation was controlled. Since the beginning, they predicted an end to the outbreak, and it eventually checked out. However, this attitude by political authorities was not critical to the newspapers' promotion of health literacy. What was determinant was the editorial choice, and we conclude that newsrooms did their best by explaining complex health concepts. The journalists who covered the outbreak are aware of that, as we could see from the interviews. We asked them whether their coverage had promoted social alarm or health literacy, and they argued for the second. Indeed, almost all of them admitted making every effort to simplify concepts, talk to people, and look for straight answers to daily behaviors:

"I believe we all played an important role in transmitting contagion sources, symptoms, and what to do in the event of an infection. Health authorities and health professionals also played an important part in answering to us daily."

"Globally, the media coverage is positive, even though there are some exceptions. As an example, I would remind the news stating that all supermarkets had run out of bottled water, followed by news explaining that it was safe to drink tap water."

"Journalists promoted literacy and helped tackle the problem within this region, by explaining all the hygiene care needed to prevent the outbreak's spreading. Unlike in other situations, like Ebola or influenza A, information was accurate and there was less speculation."

"We believe that this outbreak was well managed, showing a great collaboration between health and environment professionals and the local reporters. An effort was made in order to provide context with the help of specialists. Also, the media did not announce deaths just to be the first ones, something that often happens in online editions."

Not only was information from official sources promoted by the media coverage, but also journalists did their work and talked to the families of the victims and to the affected population. Contrary to other outbreaks that were intensely covered by the media, like influenza A or *Escherichia coli*, this outbreak of Legionnaires' disease increased the publication of news features (Table 1) and

Table 2. Number of quoted sources

Sources	%
One source Two sources Three sources	21.7 19.3 14.5
Four or more sources	44.6

Table 3. News sources status during the Legionnaires' disease outbreak in 2014

Type of sources	Within or outside the health field	%	Total %
Official sources	Within Outsider	25.5 4.2	29.7
Citizens	Common citizen Patient	21.3 5.6	26.9
Specialist sources	Within Outsider	13.4 11.4	24.8
Media			4.4
Documents	Within Outsider	2.7 0.3	3
Others			11.2

strengthened the use of news sources (Tables 2, 3). This brought the patients and the common citizen, who are seldom quoted in Portuguese health news as shown in our previous research [26, 27], into focus.

Even though news features do not have a substantial percentage, 24.1% is a higher representation when compared to other health subjects since news features are usually below 10% of all texts [28].

We would highlight the fact that almost half the analyzed news pieces quote four or more news sources (Table 2). We had previously analyzed all the health news published in the Portuguese press between September 2010 and June 2013 and realized that the Portuguese journalists quote an average of one to two news sources in each piece [28].

The present analysis is out of the ordinary, for a number of reasons. Official sources would be available to talk to the media, journalists would be on the field doing their work, and newspapers published more features than usual. All of these contribute to the increase in the number of news sources.

The analysis of the media coverage of influenza A or E. coli [27] showed the power of official sources that silenced other categories of news sources. The media coverage of the Legionnaires' disease shows a substantial percentage of official sources but also a significant percentage of patients and common citizens. The Portuguese health journalism frequently undervalues patients and the common citizen as news sources and this may be explained by a series of reasons. Because Portuguese health journalism publishes more news than news features, because the media usually quote one or two news sources that are often official, and also the small size of news texts leaves no room for alternative voices [28]. During this Legionnaires' disease outbreak, the media published more news features, and there was more room for large news pieces, which created the opportunity to listen to a group of people affected by this disease. These ended up being the alternative voices to what was up until then a communication controlled by official sources.

Conclusions

The media coverage of the Legionnaires' disease outbreak that affected Portugal in 2014 is unique when compared to the media's performance during other public health outbreaks. This outbreak was concentrated in a short time period, and the media coverage did not contribute to the public alarm that usually arises in these situations nor did it bend to the control of information that official sources tried to impose. On the contrary, the Portuguese media looked for another way to convey information. Their goal was to promote health literacy, and so they tried to explain what was at stake through infographics, images, and short questions and answers. Newspapers chose to publish more news features - long, deep stories that give voice to several news sources. Also, journalists talked more to the common citizen, which brought more understanding to whatever was happening. This is unusual, since several authors highlight reporters' preference for official sources [10-13].

The media searched for different news frames that translated into the independence from official sources and their controlled and strict discourses that often reflect power structures and positive reputation, as we explained in the literature review. That made this outbreak's media coverage unique. By avoiding any social alarm, the media were able to promote health literacy, which is something the Portuguese media are not always able to do. We claim that the constitution of a task force that

brought together the highest public health authorities encouraged a balanced journalism. Indeed, this is recognized by all the interviewed reporters, although it is only one side of the story. The other side must be analyzed within newsrooms. Newsrooms were seriously invested in reporting this outbreak, even if it was only for a short period of time. Nonetheless, the media tried to help people overcome this outbreak by giving them a quality reporting that resulted in the promotion of health literacy. We cannot forget that this outbreak happened near Lisbon, where all the main Portuguese newsrooms and health reporters are. And these beat reporters are the ones who can promote a deep balanced health coverage.

The media coverage of this outbreak stopped suddenly, and this is not something positive either for journalism or for the journalists who could not maintain this subject in the public media space. The outbreak's coverage did not last because the media's attention turned to the detention of former Prime Minister José Sócrates, who was arrested for corruption on exactly the same day health authorities announced the company responsible for the outbreak. If the media agenda could handle two news waves, perhaps this outbreak could have ended differently for the victims in the attribution of indemnities. Three years after this case, Portugal was hit by another Legionnaires' disease outbreak that started in a public hospital in November 2017. Although the 2017 outbreak was smaller, it promoted a wide and intense media coverage that unburied the 2014 outbreak and highlighted the indemnities that were never paid.

To sum up, the media coverage of the 2014 outbreak was an example to follow while it managed to be regular. However, 2 weeks after the beginning of the outbreak it vanished from the media and was replaced by the former Prime Minister's arrest. Three years after this outbreak, Legionnaires' disease was news again. Then, the lack of media pressure shed light on what the political powers did not do: they did not help the victims, did not change the law, and did not introduce inspection actions. As for journalism, it promoted a media coverage that was unique in several ways.

References

- 1 Bogart L: Reflections on content quality in newspapers. Newsp Res J 2004;25:40–53.
- 2 Burgoon JK, Burgoon M, Atkin CK: The World of the Working Journalist. New York, Newspaper Advertising Bureau, 1982.
- 3 Meijer IC, Bijleveld H: Valuable journalism: measuring news quality from a user's perspective. J Stud 2016;17:827–839.

- 4 Lacy S, Rosenstiel T: Defining and Measuring Quality Journalism. New Brunswick, Rutgers, 2015
- 5 Marinho S: Jornalismo e formação em mudança: modelos e construções na análise do caso português. Braga, Centro de Estudos de Comunicação e Sociedade, 2015.
- 6 Merril JC: The Elite Press: Great Newspapers of the World, New York, Pitman, 1968.
- 7 Bodle JV: Assessing news quality: a comparison between community and student daily newspapers. J Mass Commun Q 1996;73:672–686
- 8 Patterson T: Doing Well and Doing Good: How Soft News and Critical Journalism Are Shrinking the News Audience and Weakening Democracy – And What News Outlets Can Do about That. Harvard, Harvard University, 2000.
- 9 Gladney GA, Shapiro I, Gastald J: Online editors rate web news quality criteria. Newsp Res J 2007;28:55–69.
- 10 Sigal LV: Reporters and Officials: The Organization and Politics of Newsmaking. Lexington, DC Heath, 1973.
- 11 Brown JD, Bybee CR, Wearden ST, Straughan DM: Invisible power: newspaper news sources and the limits of diversity. J Mass Commun Q 1987;64:45–54.

- 12 Derville G: Le pouvoir des medias. Grenoble, Presses Universitaires de Grenoble, 1997.
- 13 Schudson M: Pourquoi les démocraties ontelles besoin d'un journalisme détestable? Réseaux 2009;157–158:213–232.
- 14 Serrano E: Jornalismo e elites do poder. Lisboa, Escola Superior de Comunicação Social, Instituto Politécnico de Lisboa, 1999.
- 15 Örebro LL: Journalists and politicians: a relationship requiring manoeuvring space. J Stud 2002:3:21–33.
- 16 Snehendu BK, Alcalay R, Alex WS: Health Communication: A Multicultural Perspective. Thousand Oaks, Sage, 2001.
- 17 Schiavo R: Health Communication: From Theory to Practice, ed 2. San Francisco, Jossey-Bass, 2014.
- 18 Hannawa AF, Kreps GL, Paek H-J, Schulz PJ, Smith S Jr. RLS. Emerging issues and future directions of the field of health communication. Health Commun 2014;29:955–961.
- 19 Briggs CL, Hallin DC: Health reporting as political reporting: biocommunicability and the public sphere. Journalism 2010;11:149–165.
- 20 Atkin C, Arkin EB: Issues and initiatives in communicating health information to the public; in Atkin C, Wallack L (eds): Mass Communication and Public Health: Complexities and Conflicts. Thousand Oaks, Sage, 1990, pp 13–40.

- 21 Harrabin R, Coote A, Allen J: Health in the News: Risk, Reporting and Media Influence. London, King's Fund, 2003.
- 22 Friedman DB, Hoffman-Goetz L: Literacy and health literacy as defined in cancer education research: a systematic review. Health Educ J 2008;67:285–304.
- 23 Zarcadoolas C, Pleasant AF, Greer DS: Advancing Health Literacy: A Framework for Understanding and Action. San Francisco, Jossev-Bass. 2006.
- 24 Wright KB, Sparks L, O'Hair HD: Health Communication in the 21st Century, ed 2. Malden, Wiley-Blackwell, 2013.
- 25 Holland K, Sweet M, Blood W, Fogarty A: A legacy of the swine flu global pandemic: journalists, expert sources, and conflicts of interest. Journalism 2014;15:53–71.
- 26 Lopes F, Ruão T, Marinho S, Araújo R: A media pandemic: influenza A in Portuguese newspapers. Int J Healthcare Manag 2012;5:19–27.
- 27 Lopes F, Ruão T, Marinho S, Araújo R: E. coli: uma doença em notícia em discursos de incerteza e contradição. Observatorio J 2012;6: 159–181.
- 28 Lopes F, Ruão T, Marinho S, Pinto-Coelho Z, Fernandes L, Araújo R, et al: A saúde em notícia: repensando práticas de comunicação. Braga, Centro de Estudos de Comunicação e Sociedade, 2013.