First Italian Ebola virus disease case: management of hospital internal and external communication

Lorella Salce\textsuperscript{1,2}, Simona Barbato\textsuperscript{1,2}, Daniela Renna\textsuperscript{1,2}, Francesco Bianchini\textsuperscript{1,2}, Paola Vaccaro\textsuperscript{1,2}, Fabio Mazzeo\textsuperscript{3}, Annunziatina Gasparini\textsuperscript{3}, Claudio Rizza\textsuperscript{3}, Emanuele Lanfranchi\textsuperscript{4}, Nicola Petrosillo\textsuperscript{1}, Emanuele Nicastri\textsuperscript{1}, Antonino Di Caro\textsuperscript{1}, Maria R. Capobianchi\textsuperscript{1}, Vincenzo Puro\textsuperscript{1}, Giuseppe Ippolito\textsuperscript{1}\textsuperscript{*} and the INMI EBOV Team

\textsuperscript{1}National Institute for Infectious Diseases “Lazzaro Spallanzani”, Rome, Italy
\textsuperscript{2}INMI-IFO Institutional Press Office, Rome, Italy
\textsuperscript{3}Italian Ministry of Health, Rome, Italy
\textsuperscript{4}Lazio Region, Rome, Italy

*Corresponding author: Giuseppe Ippolito, National Institute for Infectious Diseases “Lazzaro Spallanzani”, Rome, Italy  tel +390655170700, fax+3906065594224  email: giuseppe.ippolito@inmi.it
SUMMARY
On November 25, 2014, an Italian physician infected by Ebola virus in Sierra Leone was admitted to the “Lazzaro Spallanzani” National Institute for Infectious Diseases in Rome, Italy. He was the first Italian case and was successfully cured in 38 days. The staff responsible for communication had a critical role ensuring that this challenging mission went smoothly. The Institutional Press Office working together with the press offices of the Ministry of Health was able to provide the high level of expertise necessary within both medical and communication contexts. Communication strategy, tools and procedures adopted before and after the arrival of the patient are summarized.

KEY WORDS: Ebola, Italy, Communication strategy

INTRODUCTION
The 2014-2015 Ebola virus outbreak in Western Africa received unprecedented media attention. Like other high-media-attention situations related to potential public risks (or perceived risks) such as the terrorist attacks of September 11, 2001, the SARS scare in 2003 and the Anthrax episode in 2001, the public relied heavily on all types of media for obtaining information – from television to radio, newspapers, news magazines and online media. It is well known that communication between media, physicians, public health officials and scientists assumes a crucial role in the management of health care emergencies (Lowrey, et al. 2007; Wyatt, et al. 2000; Kittler, et al. 2004; Girardi, et al. 1998). Within this context, the institutional press office that provided the media with timely, accurate and relevant scientific information became an important part of the strategic communications program adopted by the Italian institutions during the Ebola outbreak. This paper summarizes the communication strategy (internal and external) adopted by the National Institute for Infectious Diseases (INMI) and the related teams during the evolution of the Ebola outbreak.

INMI communication strategy before the first Italian EVD case
In mid-2014, the internal institutional press office of the Istituti Fisioterapici Ospitalieri (IFO) of Rome, Italy collaborated with the “Lazzaro Spallanzani” National Institute for Infectious Diseases (INMI), Rome, Italy in providing information to the press regarding the various national and international activities that INMI had undertaken in response to the Ebola outbreak (Ippolito, et al. 2015a; Ippolito, et al. 2015b). The communication strategies that developed and evolved as the Ebola outbreak itself evolved, were managed by a team of communication specialists referred to in this paper as the Institutional Press Office (IPO).

Communication timeline
1. Initial outbreak of the Ebola virus in late 2013
The level of threat for the Italian population was considered by the Health authorities very low (http://www.salute.gov.it/portale/news/p3_2_1_1_1.jsp?menu=notizie&p=dalministero&id=1547). Nevertheless, already in July 2014 the IPO disseminated a national press release related to the Ebola outbreak, targeted to both the medical and general communities. In addition to outlining basic scientific information, the release also helped raise the visibility of INMI as: 1) the national referral center for viral hemorrhagic fevers, infectious disease emergencies and bioterrorism-related events – a designation it had received in 1996 and 2) a WHO Collaborating Center for the clinical care, diagnosis, response and training on Highly Infectious Diseases (HIDs) – a designation it had received in 2009. INMI’s high-level isolation unit has been already described elsewhere (Di Caro, et al. 2015).
2. September-October 2014: the first cases out of Africa
The following Ebola cases were seen in Spain and the United States: a Spanish missionary with EVD was repatriated from Liberia to Madrid (August 7); the first case of Ebola diagnosed in the US, a man who had traveled from Liberia to Dallas (September 30); a Spanish nurse was diagnosed with EVD occupationally acquired in Spain (October 6) and occupationally acquired EVD was diagnosed in the US in two nurses who had taken care of the Dallas patient (October 10 and 15). During this time, the Italian Ministry of Health, together with the Italian regional offices, established an overall plan of “preparedness”, targeted to infectious disease specialists, as well as to specialized
nursing and emergency medical staff. Included in this plan were also training materials and guidelines developed specifically by INMI. The role of the IPO in this plan was to maintain a high level of media interest and to develop a steady flow of communication focusing on management of the news related to the public’s overall sense of fear: interviews with infectious disease experts, videos and visual supports demonstrating protective garments worn by medical staff, participation in popular talk-shows, among others.


On November 23, 2014, the Ministry of Health announced that the Crisis Unit of the Italian Ministry of Foreign Affairs was organizing a medical evacuation for an Italian physician. The physician, volunteering in an Ebola treatment unit run by the Italian, non-governmental organization EMERGENCY in Sierra Leone, had tested positive for the Ebola virus. The Italian Air Force was able to manage this highly specialized type of transport from Sierra Leone to Rome, via the Aeromedical Isolation Team of the Italian Air Force. Details of the transport have been described elsewhere (Biselli, et al. 2015). The arrival at Pratica di Mare military airport received high media coverage thanks to the press office of the Italian Air Force. On November 25, 2014 the physician was admitted to the Lazzaro Spallanzani National Institute for Infectious Diseases (http://www.salute.gov.it/portale/news/p3_2_1_1_1.jsp?lingua=italiano&menu=notizie&p=dalministero&id=1840). The patient had a very severe disease progression and required intensive care with mechanical ventilation, and received multiple experimental treatments for Ebola.

4. INMI communication strategy after the arrival of the EVD patient

Upon the patient’s admission to INMI, a Crisis Communication Management Group (CCMG) was established comprising the Italian Ministry of Health, the Region of Lazio, the Italian Air Force, a representative of EMERGENCY and key persons involved at INMI in the management of the case. The primary objective of the CCMG was to produce and disseminate communication that was frequent, timely, and uniform. The group needed to take into consideration the needs of multiple targets for whom communication would be produced, and for this reason, a stringent communication approach based on a pre-established, communication plan (CP) to a) limit contact only to the authorized spokesperson, b) control the type and quality of the information provided
to journalists, c) guarantee the accuracy and appropriateness of information and d) help prevent panic.

To guarantee the success of the CP, the CCMG paid special attention to the selection of a designated spokesperson who would help ensure accuracy of information and establish credibility on behalf of the Institute. In addition to responsibilities as spokesperson, the individual chosen would also be responsible for selecting, overseeing and coordinating all persons involved in the management of the patient. The spokesperson chosen was the Scientific Director of INMI, based on his ability to clearly and concisely communicate critical information/decisions to the public; possession of a broad range of knowledge pertaining to the disease as well as specialized information; an in-depth understanding of the Institute’s policies, activities and scientific achievements; consolidated relationship with stakeholders in the global scientific community; credibility and accessibility.

The following actions represent the critical steps taken by the CCMG to inform the media on a daily basis:

Production of a total of 24 medical bulletins by a restricted group comprising the IPO Manager, the Institute’s Scientific Director, and the Head of the crisis unit, the Director of the high isolation unit.

The draft of the bulletin was managed according to the following steps:

1. The clinical information and content of the bulletins were provided to the patient’s family by telephone before release;
2. The draft of the medical bulletins was preliminarily shared with the Press Offices of the Ministry of Health, the Lazio Region, and EMERGENCY;
3. After formal approval, prior to public dissemination, the bulletin was released and circulated via internal e-mail system to all INMI personnel;
4. After dissemination to the press, the medical bulletins were published on the institutional websites of INMI and the Italian Ministry of Health as well as on all social media channels.

Organization of regularly scheduled press conferences
1. A press conference was held when the patient was admitted to the INMI, with a very high coverage by national and international media.

2. The Director of the unit in charge for clinical management of the patient was responsible for reading the daily medical bulletin.

3. The Chief of the Crisis Unit was on hand to provide answers to journalists during the public release of the medical bulletin.

4. The day of patient discharge (January 2nd), a press conference was organized with the participation of the patient, the Minister of Health, the staff involved in patient care and representatives of INMI and of all Institutions involved, including EMERGENCY.

Multiple communication tools were used to reach as many people as possible, especially in the first hours and days of the event, being open, accountable and accessible to all audiences. Most notably, on November 25, 2014, the same day as the arrival of the patient, the following accounts were up and running:

1. Twitter (https://twitter.com/SpallanzaniINMI) and Facebook (https://www.facebook.com/SpallanzaniINMI?fref=ts) accounts were created.

2. The IPO also created and regularly updated an INMI’s playlist on its YouTube channel (https://www.youtube.com/playlist?list=PLH1gfQ2WDeZ5J_mNJDXkj0I1WzhzzREpf), with several Ebola-related videos.

The trend of visualizations of the Facebook page and posts paralleled the key press releases and news coverage (Figure 1). During hospitalization, information on the EVD patient was disseminated by several radio and television broadcasts, and in web videos for about 76 appearances in TV broadcasts (56%), 31 in radio broadcasts (23%), and 28 in web TV (21%).

The twitter page had its peak during the month of December, with over 256,000 visualizations, about 5,000 profile visits, 325 mentions and 151 new followers. Figure 2 is a screenshot from twitter stats, showing the most popular tweet, about the patient’s recovery for a total of 16,526 visualizations.
Publication of a specific Press Section of the INMI institutional website for:

1. Posting daily medical bulletins, operating procedures, and training programs;
2. Detailed descriptions of all activities performed by INMI for Ebola in Italy and Western Africa.

DISCUSSION

These comments represent a synthesis of the “lessons learned/to be shared” and the key contributions to the overall success of the IPO’s communication plan.

**Need for adaptability and flexibility cannot be stressed enough**: Though there was strict adherence to a well-designed and well-managed communication plan in order to respond to the unrelenting, unimaginable number of inquiries by the media, it was necessary to be ready for myriad unexpected events that do not fit neatly into a scheduled routine: one such example is when on the tenth day after his hospital admission, the patient’s conditions worsened. In this case, a special press release was issued during the night.

**Maintaining ongoing visibility of major events in all types of media helped respond to the needs of multiple targets**: the national TV news channels (RaiNews24 and SkyNews24) covered the EVD case with several live streaming releases, especially during the release of medical bulletins and the press conferences for patient arrival and discharge. The spokesperson attended numerous TV and radio broadcasts. The RAI (national public broadcasting company) followed the case closely. National press agencies, ANSA in particular, and others (AGI, ASCA) provided day-by-day coverage. The trend of visualizations of the Facebook page and posts ran parallel to key press releases and news coverage.

**International visibility was not overlooked**: on Twitter, the IPO released tweets not only in Italian, but also in English to increase the visibility and to provide real-time updates for national and international journalists. Hundreds of encouragement tweets arrived from followers to the patient and to the medical staff.

**User-friendly concise information was also provided**: The IPO produced a short video, summarizing the news that appeared on the various media related to the EVD case. This video is available on the Press Office YouTube Channel ([https://youtu.be/6Foq3DxH29I](https://youtu.be/6Foq3DxH29I)).
Other major contributions to the overall success of the IPO were: timely release of medical bulletins which created a climate of trust, so that media operators were sure of when and where to find correct information; the key role of social media accounts, a sure source for real-time updated news; intense coverage of the press conferences with national TV broadcasts and live TV streaming; the involvement in the press conferences of leaders from national and regional health authorities, which increased the perception of reliability and inspired empathy. All of the above facilitated a climate of mutual respect between those providing the information and those receiving it. The fact that the IPO staff had nurtured a positive relationship with journalists over the years prior to the Ebola event undoubtedly contributed to the journalists’ willing adherence to the IPO’s rigorous communication procedures.

Lowrey et al. (2007) in the article “Effective media communication of disasters: Pressing problems and recommendations” brilliantly depict the problems that can arise due to the very different roles, responsibilities, and perspectives that journalists and public health communication professionals have when trying to communicate to the public during natural and human-initiated disasters (Lowrey et al., 2007). With reference to two of the most pressing problems cited in this article – “the lack of coordination” between public health communication professionals and journalists” and “the lack of resources for appropriately evaluating information and disseminating it efficiently” – the authors of this paper felt a great sense of satisfaction at having received positive feedback from journalists themselves regarding these two points (Lowrey et al., 2007).

With regard to the IPO communication strategy, these three components were perhaps those that were key to its success: 1) the appreciation by the IPO staff that the role of a press office goes beyond providing information to include the role of mediator; 2) the accessibility and ongoing presence (at times omnipresence) of the Scientific Director; 3) the unquestionable commitment to ensuring the Ebola patient’s privacy and dignity as well as that of family members – but also the well-being of the Ebola patient and all patients being cared for in this time period. Given that INMI is a public hospital, day-to-day hospital operations for the doctors, nurses, patients and administrative staff needed to continue to maintain the high standards for which the institution is renowned. The successful coordination of all parties/institutions involved as well as the effective
use of resources can perhaps be traced to the enormous sense of teamwork, not only among those who were part of the IPO efforts, but among all of the hospital workers.

ACKNOWLEDGEMENTS

The authors thank Ms. Lesley Pritikin for her assistance in manuscript preparation.

This work is part of “Ricerca Corrente” and “Ricerca Finalizzata” funded by the Italian Ministry of Health.

Members of the INMI EBOV Team: IDs specialists: Nicola Petrosillo, Emanuele Nicastri, Nazario Bevilacqua, Evangelo Boumis, Stefania Cicalini, Pierangelo Chinello, Angela Corpolongo, Vincenzo Galati, Andrea Mariano, Silvia Rosati, Fabrizio Taglietti, Laura Vincenzi; Intensive care Physicians: Mario Antonini, Ilaria Caravella, Gabriele Garotto, Luisa Marchioni, Micaela Maritti; Cardiologist: Gianluigi Biava; Radiologist: Elisa Busi Rizzi; Virology and Microbiology Laboratorians: Maria Rosaria Capobianchi, Antonino di Caro, Concetta Castilletti, Licia Bordi, Eleonora Lalle, Silvia Meschi, Daniele Lapa, Patrizia Marsella, Francesca Colavita, Roberta Chiappini, Antonio Mazzarelli, Serena Quartu, Chiara Agrati, Fabrizio Carletti, Federica Forbici, Maria Beatrice Valli, Isabella Abbate, Alessandra Amendola, Anna Rosa Garbuglia, Maria Grazia Paglia, Eugenio Bordi, Damiano Travaglini, Antonietta Toffoletti; Nurses: Gianni Battisti, Alessandra Coppola, Loredana De Marchis, Nicola De Marco, Paolo Giacomini, Fabio Di Gianbattista, Mario Guiducci, Antonio Marasco, Antonella Marzolini, Alessandro Mercuri, Paola Nieddu, Silvia Ondedei, Maurizio Vescovo, Laura Vitolo; Radiology Technician: Maurizio Morea; Drivers biocontainment ambulance: Gaetano Battisti, Marco Liguori.


REFERENCES


Figure 1.
Facebook: Trend of visualizations and post sawed per day
Figure 2. Twitter: screenshot of visualizations