

Communication about vaccination: A shared responsibility

Luigi R. Biasio^a, Giovanni Corsello^b, Claudio Costantino^b, Gaetano M. Fara^c, Giuseppe Giammanco^d, Carlo Signorelli^e, Davide Vecchio^b, and Francesco Vitale^b

^aUniversity Contract Lecturer in Vaccinology, Rome, Italy; ^bDepartment of Sciences for Health Promotion and Mother-Child Care “G. D’Alessandro,” University of Palermo, Palermo, Italy; ^cDepartment of Public Health and Infectious Diseases, “La Sapienza” University of Rome, Rome, Italy; ^dDepartment of Hygiene and Public Health, University of Catania, Catania, Italy; ^eDepartment of Biomedical, Biotechnological and Translational Sciences, University of Parma, Parma, Italy

ABSTRACT

Vaccine hesitancy is an important issue to be addressed, due to the risk of decrease of vaccination coverage and consequent control of preventable diseases. While it is not considered a specific determinant, poor or inadequate communication can contribute to vaccine hesitancy and negatively influence vaccination uptake. As a contribution to the ongoing discussion regarding this theme and in the perspective of the implementation of the upcoming national vaccination plan in Italy, the Erice Declaration was drafted by experts in the field of immunization following a 5-day residential, independent workshop regarding communication topics in vaccinology. The aim of the current letter is to present to the broader international audience such a contribution, proposing the identification of the main actions that should be taken into account and prioritized in order to improve communication in the domain of vaccination.

ARTICLE HISTORY

Received 23 May 2016
Accepted 1 June 2016

KEYWORDS

communication; Italy;
national vaccination plan;
vaccine hesitancy;
vaccination coverage

Vaccine hesitancy is defined as “a delay in acceptance or refusal of vaccines despite availability of vaccination services.”¹ It is an important issue to be addressed, as effective control of vaccine-preventable diseases requires maintenance of high coverage rates of timely vaccination.² Although vaccines represent one of the safest and most effective tools of prevention, searching the Internet about them shows several controversies between the consensus of experts and the perceptions of public groups or individuals. The diffusion of conflicting information and the amplification via traditional and new media channels, provide a confusing context for the public, but also for some health professionals who, at their turn, are becoming hesitant about vaccination. Suspicion and rejection of vaccines among a part of the public is as old as vaccines themselves: nevertheless, today new situations and dynamics have made questions about their safety more critical, due to the recent introduction of additional vaccines into routine programs and the increase in the delivery of information and the large diffusion of social media.

Whether missing or inadequate communication is a determinant of vaccine hesitancy, is under discussion. The WHO Working Group on Vaccine hesitancy³ considers that communication is more a tool, than a determinant. Yet, even though it is not a specific factor - like confidence, complacency and convenience - inadequate communication can contribute to vaccine hesitancy and negatively influence vaccination uptake. Poor quality services of any type, including scarce communication, can weaken acceptance also in countries with well-resourced vaccination programs. For example, at the start of the 2009 H1N1 flu epidemic, its unpredictability was not underlined enough: in most cases Health Institutions did

not communicate properly their inability to anticipate the severity and the potential spread of the new virus, as well as the time of availability and expected efficacy of vaccines (many of which arrived late, after the main waves of infections peaked). These controversial aspects had a great media attention at the beginning of the pandemic and declined before it reached its peak. Public risk perceptions and behaviors may have followed media logic rather than epidemiological logic,⁴ and countries ended in a persistent decrease of trust among the population and health professionals.

Health communication is a composite and evolving discipline: in addition to targeted communication - e.g. focused on specific hesitancy issues - it needs to be addressed in general. As a contribution to the ongoing discussion on these subjects, the 2016 Erice Declaration was drafted by Italy’s experts in the field of immunization and communication, to transfer to the national level the main goals for a better communication in the field of vaccination in Italy and transform them into country-specific proposal of measures.

As in 2014 - when the priorities and challenges of the Italian immunization system were discussed^{5,6} - this new declaration arose out of an intensive residential, independent 5-day workshop organized in Erice, Sicily, by the International School of Epidemiology and Preventive Medicine “G. D’Alessandro” in collaboration with the Italian Societies of Public Health (SItI) and Pediatrics (SIP). Faculty included representatives of the Italian Ministry of Health and its technical branches (National Council of Health; Italian Institute of Health), the Academia and representatives of the Regional Health Authorities involved in immunization programs. Importantly, contributions came

also from representatives of groups of population more or less in favor of vaccination.

During the workshops, participants were engaged in debates and proposals on vaccination and communication strategies. The 2016 Erice Declaration summarizes the workshop's conclusions; it has been endorsed by participants and circulated to key stakeholders at a very critical time, when discussions on the upcoming new Italy's national vaccination plan are ongoing, including the need and opportunity of implementing new vaccinations and communication strategies^{7,8}: reaching out and involving stakeholders and the population need to take place early in processes of decision-making and communicating about the organization and delivery of important activities like the introduction of new national vaccination programs.

1. TO COMMUNICATE IN VACCINOLOGY IS A COLLECTIVE RESPONSIBILITY - `Communication is a whole of elements and actions that allows the distribution of information through a relational process. To communicate means to exchange information and perceptions among all the involved subjects, in particular, in the context of vaccination, among the Institutions, health operators and the whole population in all of her parts, more or less favorable to vaccine prevention.
2. INFORMATION EXCHANGE MUST BE RECIPROCAL - Preparing and applying a communication vaccine plan, key points must be proactivity and listening.⁹ To provide evidence based information and/or direction is substantial and deontological; however - according to different recent observations^{10,11,12} - it doesn't appear enough to induce a change in the behaviors of the population not favorable to vaccine prevention.
3. IT IS NECESSARY TO LISTEN TO THE DEMANDS OF THE POPULATION - Through the many available web tools, a continuous monitoring of the perceptions, knowledge, attitudes and opinions of the public must be executed,^{7,13,14} in order to found the communication on the evidences of the informative needs on which to calibrate the messages and the dialog, with the purpose to re-establish the trust among the Institutions, health professionals and the population.
4. HEALTH SERVICES AND FAMILY DOCTORS ARE CALLED TO COLLABORATE - Health Services should actively implement the application of vaccination plans as approved by the Institutions to impact on the health of the single individuals and the population. The realization of a national vaccination registry, computerized and integrated, managed by the Public Health, with the possibility of access by the Family Doctors and Pediatricians - to know the immunization state of their own assisted subjects - seems essential to timely recognize and counter vaccine hesitancy.
5. ADOPTION OF INNOVATIVE TOOLS SHOULD BE ENCOURAGED - It is important to identify and develop new tools through specific national and regional projects^{15,16} and engage not only the operators, but also the population in the use of communication channels among peers, such as the Italian Paper for the Promotion of Vaccinations,¹⁷ born from the collaboration with

existing initiatives - as the portal VaccinarSi¹⁸ - and with groups of the population: it represents a call to action to be offered to all those people who desire to take the opportunity to sustain and spread the importance of vaccination programs.

6. COMMUNICATION MUST BE GROUNDED ON INTEGRATED AND SHARED STRATEGIES - Today's tools (old and new media) are effective when used with attention and creativeness, according to shared strategies and methodologies,⁹ so that can impact on the behaviors, including the aware acceptance of vaccination. Communication must derive from evidence based data, assuming the most proper form for the best understanding of vaccination practices; for this purpose it is appropriate to consult communication experts, as well as to increase the collaboration and the integration among the media.
7. START TEACHING THE VALUE OF PREVENTION SINCE PRIMARY SCHOOL - Coherent and uniform interventions of education and promotion of prevention must be structured, including vaccination, in primary and secondary schools, possibly integrated in the plans of formative offer, involving the teaching staff and the families; the scholastic education to the value of prevention must represent a fundamental moment for the development of an aware vaccine culture in the whole population.
8. PROFESSIONAL TRAINING AND CONTINUING EDUCATION ARE FUNDAMENTAL - Pertinent studies show the crucial role of the health operators in the acceptance of vaccinations by the population.¹⁹ Still today some, for personal beliefs founded upon prejudices or for lack of training, represent a constraint to the acceptance of vaccines. Their action is concretized in forms of social disproportion of the vaccine offer, in particular toward part of the population, such as categories at risk that should be more protected. Accordingly, it appears fundamental to invest in the professional training and continuing education, through the creation of specific courses offered by the scientific community.^{20,21}
9. TEACH VACCINOLOGY IN THE DEGREE COURSES - Starting from the courses of study of medicine and sanitary professions, vaccinology must be taught on the basis of the best evidences. The teaching of the several subjects of the vaccinology (both biological and social) must be developed through a "core curriculum" integrated and shared along the whole formative course.²²
10. COMMUNICATION PASSES THROUGH THE BEHAVIOR OF THE OPERATORS - Physicians who are not vaccinated, or do not vaccinate their own relatives, transmit mistrust in vaccinations that no verbal communication is able to oppose.^{23,24,25} The ethical duty of the physician to vaccinate himself to protect his contacts must be the subject of all the types and levels of training to be continued, after the degree, in the post-graduate and general practitioner courses and be also included among the objectives of continuing education for the whole sanitary area.^{21,26} Training should be also offered on the field, in the vaccination and pediatric or

general medicine services, for all the residents in Hygiene and Preventive Medicine, Pediatrics, medical trainees of General Medicine, students of the courses of degree in sanitary assistance.

11. TRAINING IN COMMUNICATION CAN MODERATE VACCINE HESITANCY - In conclusion, communication based on valid and shared strategies, as well as on coherent behaviors, can modify the attitudes toward vaccinations, becoming one of the main components of the global strategy to oppose vaccine hesitancy.^{3,27} The training of health operators is therefore fundamental also on the techniques of communication, in the optics and with the primary objective of a return to an optimal vaccination coverage.²⁸

Following the recommendations from National and International Health Organizations^{1,29} this Declaration of Erice intends to be an enriching input from representatives of the scientific and public health Italian community to identify the main actions that should be taken into account and prioritized at the national level in order to improve communication in the field of vaccination, as well as a better dialog between the Institutions, the scientific community, the health operators and the public.

Disclosure of potential conflicts of interest

No potential conflicts of interest were disclosed.

Acknowledgments

The following attended the course and took part in the discussions and in the preparation of the declaration (in alphabetical order): **Alessandro Appetiti**, **Giorgio Baccari**, **Roberta Barbolini**, **Angelo Battaglia**, Adriana Bazzi, Silvia Cannone, Paolo Castiglia, Maria C. Castiglione, Grazia Celestri, Paola Cella, Giampietro Chiamenti, Domenico Chindemi, Laura Civita, Salvatore Clemente, Annarosa Colautti, Gilberto Corbellini, Manuela Cracchiolo, Placido D'Agati, Mario D'Asta, Angela Di Martino, Francesco di Nardo, Francesca Fagioli, Giuseppe Ferrera, Antonio Ferro, Daniel Fiacchini, Tiziana Fragapane, Tolinda Gallo, Antonella Gangemi, Giorgio Geratana, Francesco Gesualdo, Gabriele Giorgianni, Angela Guarina, Ranieri Guerra, Stefania Iannazzo, Vincenzo Insinga, **Francesco Maraglino**, Valentina Marchese, **Vito Margherita**, Claudia Marotta, Cristina Mauceri, Stefania Menolascina, Manuel Murciano, Giuseppina Napoletano, Sara Palmeri, Bruno Papia, Sergio Pecorelli, Gaia Piccinni, Alice Pignatti, Francesca Quattrococo, Jlenia Reghizzi, Vincenzo Restivo, Caterina Rizzo, Silvia Rota, Roberta Salvaggio, Roberta Siliquini, Ivana Silvestro, Francesco Soncini, Garden Tabacchi, Gino Taranto, Anna Maria Tranchida, Paolo Trusiano, Alberto Ugazio, Gianmarco Ventura, Francesco Venturelli, **Giovanni Vitali Rosati**.

References

- [1] Hickler B, Guirguis S, Obregon R. Vaccine special issue on vaccine hesitancy. *Vaccine* 2015; 33(34):4155-6; PMID:25896381; <http://dx.doi.org/10.1016/j.vaccine.2015.04.034>
- [2] Salmon DA, Dudley MZ, Glanz GM, Omer SB. Vaccine Hesitancy: Causes, consequences, and a call to action. *Am J Prev Med* 2015; 49 (6 Suppl 4):S391-8; PMID:26337116; <http://dx.doi.org/10.1016/j.amepre.2015.06.009>
- [3] MacDonald NE, the SAGE working group on vaccine hesitancy. Vaccine hesitancy: Definition, scope and determinants. *Vaccine* 2015; 33 (34):4161-4; PMID:25896383; <http://dx.doi.org/10.1016/j.vaccine.2015.04.036>
- [4] Reintjes R, Das D, Klemm C, Richardus JH, Kessler V, Ahmad A. "Pandemic Public Health Paradox:" Time Series Analysis of the 2009/10 Influenza A / H1N1 Epidemiology, Media Attention, Risk Perception and Public Reactions in 5 European Countries. *PLoS One* 2016; 11(3):e0151258; PMID:26982071; <http://dx.doi.org/10.1371/journal.pone.0151258>
- [5] Odone A, Fara GM, Giammanco G, Blangiardi F, Signorelli C. The Future of immunization policies in Italy and in the European Union: the Declaration of Erice. *Hum Vaccin Immunother* 2015; 11(5):1268-71; PMID:25806425; <http://dx.doi.org/10.1080/21645515.2015.1019980>
- [6] Signorelli C, Odone A. Advocacy communication, vaccines and the role of scientific societies. *Ann Ig* 2015; 27(5):737-47; PMID:26661915
- [7] Ministero della S. Piano Nazionale Prevenzione Vaccinale 2016-2018. Allegato al parere del CSS 9 giugno 2015. Available from: <http://www.quotidianosanita.it/allegati/allegato1955037.pdf>; last access 2016 May 10
- [8] Bonanni P, Azzari C, Castiglia P, Chiamenti G, Conforti G, Conversano M, Corsello G, Ferrera G, Ferro A, Icardi G, et al. The 2014 lifetime immunization schedule approved by the Italian scientific societies. *Epidemiol Prev* 2014; 38(6 Suppl 2):131-46; PMID:25759359
- [9] Goldstein S, MacDonald NE, Guirguis S. the SAGE Working Group on Vaccine Hesitancy. Health communication and vaccine hesitancy. *Vaccine* 2015; 33(34):4212-4; PMID:25896382; <http://dx.doi.org/10.1016/j.vaccine.2015.04.042>
- [10] Bedford H. Pro-vaccine messages may be counterproductive among vaccine-hesitant parents. *Evid Based Med* 2014; 19(6):219; PMID:25185270; <http://dx.doi.org/10.1136/ebmed-2014-110037>
- [11] Regione V. Progetto "Indagine sui Determinanti del Rifiuto dell'Offerta Vaccinale nella Regione Veneto. Available from: <http://prevenzione.ulss20.verona.it/iweb/1324/argomento.html>; last accessed 2016 May 10
- [12] Nyhan B, Reifler J, Richey S, Freed GL. Effective Messages in vaccine promotion: A randomized trial. *Pediatrics* 2014; 133(4):e835-42; PMID:24590751; <http://dx.doi.org/10.1542/peds.2013-2365>
- [13] Censis. La cultura della vaccinazione in Italia: un'indagine sui genitori (Ottobre 2014). Available from: http://www.censis.it/?shadow_comunicato_stamp=120978; last accessed 2016 May 10
- [14] Fadda M, Allam A, Schulz PJ. Arguments and sources on Italian online forums on childhood vaccinations: Results of a content analysis. *Vaccine* 2015; 33(51):7152-9; PMID:26592140; <http://dx.doi.org/10.1016/j.vaccine.2015.11.007>
- [15] Ministero della S. Progetto CCM 2013: Strategie e interventi di comunicazione sanitaria multi-obiettivo sulle malattie infettive prevenibili e sulle vaccinazioni per aumentare le coperture vaccinali nella popolazione. Available from: <http://www.epicentro.iss.it/temi/vaccinazioni/DocumentazioneRegioni.asp>; last accessed 2016 May 10
- [16] Odone A, Ferrari A, Spagnoli F, Visciarelli S, Shefer A, Pasquarella C, Signorelli C. Effectiveness of interventions that apply new media to improve vaccine uptake and vaccine coverage. *Hum Vaccin Immunother* 2015; 11(1):72-82; PMID:25483518; <http://dx.doi.org/10.4161/hv.34313>
- [17] Carta italiana per la promozione delle vaccinazioni. Available from: <http://www.teamvaxitalia.it/download-carta.html>; last accessed 2016 May 10
- [18] Ferro A, Odone A, Siddu A, Colucci M, Anello P, Longone M, Marcon E, Castiglia P, Bonanni P, Signorelli C. Monitoring the web to support vaccine coverage: Results of two years of the portal vaccinarSi. *Epidemiol Prev* 2015; 39(4 Suppl 1):88-93; PMID:26499422
- [19] Giambi C, Del Manso M, D'Ancona F, De Mei B, Giovannelli I, Cattaneo C, Possenti V, Declich S. Actions improving HPV vaccination uptake. Results from a national survey in Italy. *Vaccine* 2015; 33(21):2425-31; PMID:25869895; <http://dx.doi.org/10.1016/j.vaccine.2015.04.007>
- [20] Costantino C, Mazzucco W, Azzolini E, Baldini C, Bergomi M, Biafiore AD, Bianco M, Borsari L, Cacciari P, Cadeddu C, et al. Influenza vaccination coverage among medical residents: an Italian multicenter survey. *Hum Vaccin Immunother* 2014; 10 (5):1204-10; PMID:24603089; <http://dx.doi.org/10.4161/hv.28081>

- [21] Costantino C, Amodio E, Calamusa G, Vitale F, Mazzucco W. Could university training and a proactive attitude of coworkers be associated with influenza vaccination compliance? A multicentre survey among Italian medical residents. *BMC Med Educ* 2016 Jan 29; 16:38; PMID:26830337; <http://dx.doi.org/10.1186/s12909-016-0558-8>
- [22] Biasio LR. L'insegnamento della Vaccinologia nei CLM in Medicina e Chirurgia. *Med Chir* 2013; 59:2630-6.
- [23] Epicentro. Progetto HProImmune. Available from: <http://www.epicentro.iss.it/temi/vaccinazioni/HProimmune2014.asp>; last accessed 2016 May 10
- [24] Diekema DS. Improving childhood vaccination rates. *N Engl J Med* 2012; 366(5):391-3; PMID:22296072; <http://dx.doi.org/10.1056/NEJMp1113008>
- [25] Costantino C, Amodio E, Vitale F, Maida C, Maringhini G, Ascitto R, Tramuto F, Calamusa G. Attitudes, behaviours and perceptions of Italian General Practitioner trainees towards influenza vaccination in Western Sicily (Italy). *Ital J Public Health* 2012; 9(1):33-9.
- [26] Di Gregori V, Franchino G, Marcantoni C, Simone B, Costantino C. Logistic regression of attitudes and coverage for influenza vaccination among Italian public health medical residents. *J Prev Med Hyg* 2014; 55(4):152-7; PMID:26137789
- [27] Odone A, Signorelli C. When vaccine hesitancy makes headlines. *Vaccine* 2015; PMID:26657186; <http://dx.doi.org/10.1016/j.vaccine.2015.11.051>. [Epub ahead of print]
- [28] Bonanni P, Ferro A, Guerra R, Iannazzo S, Odone A, Pompa MG, Rizzuto E, Signorelli C. Vaccine coverage in Italy and assessment of the 2012-2014 National Immunization Prevention Plan. *Epidemiol Prev* 2015; 39(4 Suppl 1): 146-58; PMID:26499433
- [29] European Centre for Disease Prevention and Control (ECDC). Communication on immunisation – building trust. Stockholm: ECDC; 2012.