**EDITORIAL** 

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## Slow progress in measles and rubella elimination in Italy

Giovanna Adamo (1), Valentina Baccolini (1), Carolina Marzuillo (1), Giulia Sturabotti (1), Paolo Villari (1,2)

- (1) Department of Public Health and Infectious Diseases, Sapienza University of Rome, Rome, Italy;
- (2) Chairperson of the Italian National Verification Committee for measles and rubella elimination

CORRESPONDING AUTHOR: Prof. Paolo Villari, Department of Public Health and Infectious Diseases, Sapienza University of Rome, Piazzale Aldo Moro 5, Rome, 00185, Italy, tel: +39 06 49914886, fax: +39 06 49914449, E-mail: paolo.villari@uniroma1.it

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The success achieved in a number of countries against measles and rubella shows that elimination is technically possible with the vaccines available and with targeted vaccination strategies. The current paradox in prevention is that immunisation programs can become victims of their own success. Some vaccine-preventable diseases have become so sporadic that people, and even health care professionals, fail to appreciate the benefits of vaccination. Measles and rubella are not perceived as a serious problem and anti-vaccine movements have gained popularity in the last decades, dangerously publicising unfounded vaccine safety concerns. Moreover, it is well known that prevention is in crisis in times of economic crisis: there is much evidence that Italian Regions with financial problems devote less attention and fewer resources to prevention activities [1-6].

The WHO Regional Office for Europe launched in 2012 the European Vaccine Action Plan, with all 53 Member States making commitments to eliminate the endemic transmission of measles and rubella by 2015 [7]. In 2013, following a global technical consultation on the feasibility of global measles eradication, the WHO developed and published technical guidance on the regional process for verifying measles and rubella elimination. This guidance was modelled on the process for certifying poliomyelitis eradication and 2012 was selected as the first year in which evidence on elimination would be gathered. Since 2012, Member States are required to provide evidence each year on the status of endemic measles and rubella transmission in their country. A standardised annual report form is used to assist each National Verification Committee (NVC) in compiling and documenting evidence along the following five principal lines: the epidemiology of measles, rubella, and congenital rubella syndrome (CRS); the performance of measles, rubella, and CRS surveillance; the molecular epidemiology of measles and rubella viruses; population immunity; and the sustainability of the national immunisation program [8, 9]. The key components are interrelated; therefore, it is necessary to provide evidence that the data are valid, complete, representative and consistent among different information sources.

Italy in 2011 renewed its commitment to eliminate measles by approving a new national elimination plan. The plan, which addressed all components of the WHO elimination strategy, was approved by the State-Regions collegial body (Conferenza Stato Regioni), which means that all 21 Regions are committed to the objectives and strategies included in the plan [10]. The goal of measles elimination and incidence reduction of CRS cases was postponed from 2007 to 2015. However, despite every effort, the objectives of the National Plan have not yet been achieved.

During 2013 2,205 cases of measles (41 per million population) and 66 cases of rubella (1 per million population) occurred in Italy. MMR vaccination coverage was 90% for the first dose and 84% for the second dose. In 2014, measles incidence was 27 per million population, with a considerable number of outbreaks (193) occurring all over the country. Rubella incidence was 0.4 per million, occurring in 11 Regions. MMR vaccination coverage for 2014 was 87% for the first dose, and 83% for the second dose, with none of the Regions reaching the 95% vaccine coverage target [7,9]. In 2015, the incidence of measles decreased to 3.9 per million population (253 cases), whereas the incidence of rubella remained stable (0.4 per million population; 24 cases). MMR coverage data are a matter of concern (85% for the first dose and 83%



for the second dose). Between 1 June 2015 and 31 May 2016, Italy reported 515 cases, accounting for 28% of the EU/EEA cases in the 12-month period. Most of the Italian cases (365) were reported between January and May 2016 [11].

Italy therefore is still at the stage of limited control of measles, and several priorities can be identified. First, there is need to increase the commitment of the 21 Italian Regions. To strengthen their ownership of the elimination goals, the Regions should clearly understand their situation in the elimination process. Since the annual status reports of the Italian NVC permit the documentation of progress across the whole country, and not just of a single Region, one potentially effective strategy could be to produce regional annual reports to provide Regions with feedback about their own progress towards elimination. Furthermore, regional reports could be instrumental in identifying those Regions with major problems, which must be supported as a priority through appropriate interventions such as audit and site visits. Second, supplemental immunisation activities are needed for population groups with levels of immunity that are inadequate to interrupt endemic measles and rubella transmission. Additional immunisation efforts should be targeted at susceptible groups such as health care workers. Another priority is the need to improve the health literacy of citizens in the field of vaccination. Finally, to interrupt the circulation of measles and rubella viruses, public health institutions should also prioritise the strengthening of surveillance and outbreak control systems.

All the above-mentioned priority actions should be pursued to reach the goal of measles and rubella elimination; indeed, these actions have already been included in two major projects financed by the Ministry of Health in support of the National Plan for the Elimination of Measles and Congenital Rubella. Without sustained political commitment, increased investment and accelerated actions, the eradication of measles and rubella will be not achieved.

## **Conflict of interests**

None declared.

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## References

- 1. Di Marco M, Marzuillo C, De Vito C, Matarazzo A, Massimi A, Villari P. La prevenzione in tempi di crisi economica e di spending review. Il caso della Regione Lazio. Ig Sanita Pubbl 2013; 69(6): 639-56.
- 2. De Vito C, Di Marco M, Marzuillo C, Matarazzo A, Massimi A, Villari P. Does economic crisis affect prevention services? An Italian region as a case study. Epidemiol Biostat Public Health 2014; 11(2): e9975.
- 3. Rosso A, De Vito C, Marzuillo C, Massimi A, D'Andrea E, Villari P. The negative effect of financial constraints on planning prevention activities: some evidence from the Italian experience. Eur J Public Health 2015; 25(6): 1117-9.
- 4. Rosso A, Marzuillo C, Massimi A, et al. Policy and planning of prevention in Italy: results from a critical appraisal of prevention plans developed by regions for the period 2010-2012. Health Policy 2015; 119(6): 760-9.
- 5. De Vito C, Massimi A, Di Thiene D, et al. Low level of attention to health inequalities in prevention planning activities of the Italian Regions. Int J Equity Health 2016; 15: 28.
- 6. Unim B, De Vito C, Massimi A, et al. The need to improve implementation and use of lifestyle surveillance systems for planning prevention activities: an analysis of the Italian Regions. Public Health 2016; 130: 51-8.
- 7. Biellik R, Davidkin I, Esposito S, et al. Slow progress in finalizing measles and rubella elimination in the European Region. Health Aff (Millwood) 2016; 35(2): 322-6.
- 8. World Health Organization Regional Office for Europe. Eliminating measles and rubella. Framework for the verification process in the WHO European Region. Geneva: World Health Organization, 2014. Available from: http://www.euro.who.int/\_data/assets/pdf\_file/0009/247356/Eliminating-measles-and-rubella-Framework-for-the-verification-process-in-the-WHO-European-Region.pdf
- 9. World Health Organization Regional Office for Europe. 4th meeting of the European Regional Verification Commission for Measles and Rubella Elimination (RVC): 26-29 October 2015, Copenhagen, Denmark. Geneva: World Health Organization, 2016. Available from: http://www.euro.who.int/en/health-topics/communicable-diseases/measles-and-rubella/publications/2016/4th-meeting-of-the-european-regional-verification-commission-for-measles-and-rubella-elimination-rvc
- 10. Italian Ministry of Health. Piano nazionale per l'eliminazione del morbillo e della rosolia congenita 2010-2015. [National Plan for the elimination of measles and congenital rubella 2010-2015]. Rome: Ministero della Salute, 2011. Available from: http://www.salute.gov.it/imgs/C\_17\_pubblicazioni\_1519\_allegato.pdf
- 11. European Centre for Disease Prevention and Control. Surveillance data. Available from: http://ecdc.europa.eu/en/healthtopics/measles/epidemiological\_data/Pages/annual\_epidemiological\_reports.aspx