

## Moving towards compulsory vaccination: the Italian experience

Walter Ricciardi<sup>1,2</sup>, Stefania Boccia<sup>2</sup>, Roberta Siliquini<sup>3</sup>

1 National Institute of Health, Rome, Italy

2 Section of Hygiene-Institute of Public Health-Faculty of Medicine, Università Cattolica del Sacro Cuore, Fondazione Policlinico "A. Gemelli", Rome, Italy

3 Department of Public Health, University of Torino, Torino, Italy

**Correspondence:** Stefania Boccia, Section of Hygiene-Institute of Public Health, Fondazione Policlinico 'Agostino Gemelli'. L.go F. Vito, 1 – 00168 Rome, Italy, Tel: 0039 (0)6 30154396, e-mail: stefania.boccia@unicatt.it, stefania.boccia@policlinicogemelli.it.  
.....

Vaccine hesitancy is a phenomenon that has increased widely in the last few years, in the Europe and in the USA, giving its consequences on vaccine coverage rates. The decrease in those rates caused an enormous spread of preventable infections that were quite rare in the past years, or, at least, presented mild consequences. Since immunization is an issue of coverage rates, the European Council prompted the National Health Authorities to face the challenge of reaching the target of 95% of the population, set by European Centre for Disease Prevention and Control (ECDC), through the implementation of effective vaccination policies.

In Italy, coverage rates have been decreasing in the last few years. In 2016, the following coverage rates at 24 months for birth cohort 2014 have been reported by Italian Ministry of Health: Polio 93.33%, Tetanus 93.72%, Diphtheria 93.56%, Pertussis 93.55%, Hepatitis B 92.98%, *Haemophilus influenzae* type B 93.05%, Measles 87.26%, Mumps 87.20%, Rubella 87.19%, Pneumococcal Conjugate 88.35% and Meningococcal C Conjugate vaccine 80.67%. Starting from the new Italian National Immunization Prevention Plan 2017–19, some innovative aspects were introduced: new vaccines covered by the National Healthcare System, new target populations and the implementation of online vaccination registries. Moreover, the necessity of a specific training on vaccination for all health care professionals was addressed as well as the proposal of introducing sanctions for physicians who discourage vaccinations [1]. Moreover, a stronger measure was taken, with a new law adopted in July 2017 [2]. According to this law, ten vaccines are now mandatory in Italy for children aged between 0 and 16 years and for unaccompanied foreign minors, namely against Tetanus, Poliomyelitis, Hepatitis B, Diphtheria, Pertussis, *Haemophilus B*, Measles, Mumps, Rubella, Chicken Pox, and these are provided according to the national immunization schedule for each birth cohort for free within the Essential Level of Care. Four additional ones, instead, against meningococcal, pneumococcal disease and rotavirus infection, are recommended and provided for free. The proof of vaccination is required when enrolling children in kindergartens and schools, otherwise a fine must be paid by parents that do not comply the requirements. This law aims also to cancel the differences in the vaccine offer that existed amongst the Italian Regions. In fact, before this law, four vaccines (Diphtheria, Poliomyelitis, Tetanus, Hepatitis B) were mandatory in Italy, while vaccines against Pertussis, *Haemophilus B*, Measles, Mumps, Rubella, Chicken Pox, Pneumococcal and Meningococcal C diseases were recommended.

With this new law, Italy has followed the measure adopted previously by California in the USA, which require vaccination for school attendance [3], as a result of a measles epidemic in 2011. The

same situation, in fact, led to the urgent need of a similar legislation in Italy: by 30 May 2017, more than 2700 measles cases were reported by National Institute of Health since 1 January 2017, of which 89% of cases occurred in unvaccinated subjects, and 6% among those receiving only one dose of vaccine. These outbreaks reflect the fact that for measles the coverage target of 95% was far from being reached before the introduction of the new law.

On March of this year, the WHO expressed concern about measles outbreaks spreading across Europe despite the availability of a safe, effective vaccine [<http://www.euro.who.int/en/media-centre/sections/press-releases/2017/measles-outbreaks-across-europe-threaten-progress-towards-elimination>]. In this context, the new law adopted in Italy might be the first of many in Europe. Since 3 years in Germany, there is a law that requires parents to give proof of vaccination counseling by the doctors before enrolling children in kindergarten. According to a recently proposed law, however, it would become mandatory for all kindergartens to notify the German Health Authority if parents have not submitted proof of vaccination counseling for their children [4]. In addition, the French Prime Minister Édouard Philippe, recently claimed it was 'unacceptable' that children are 'still dying of measles' in the country where some of the earliest vaccines were pioneered. Currently, Diphtheria, Tetanus and Polio vaccines are mandatory in France; however, the government has announced that eight additional recommended vaccines will be mandatory from 2018: Whooping Cough, Measles, Mumps, Rubella, Hepatitis B, Influenza, Pneumonia and Meningitis C [5].

In conclusion, we envisage that government policies should be supported by evidence, therefore monitoring the success of an implemented measure is fundamental, and this is what is required by the Italian Ministry of Health for the years to come after the implementation of the new law. There are not official data yet, though the latest available data from the Ministry of Health reports a vaccine coverage increase from June to October, 2017 of 1.0% for the hexavalent vaccine against diphtheria, tetanus, pertussis, poliomyelitis, H influenzae type b, and hepatitis B compared with 2016, and of 2.9% for the measles, mumps, and rubella vaccine [6]. These encouraging data should prompt the Italian Government to go on with this attitude as well as being taken as an example by other European and International Countries.

### Acknowledgements

We thank Alessia Tognetto and Vittoria Colamesta for their critical reading of the manuscript.

## References

- 1 Signorelli C, Guerra R, Siliquini R, Ricciardi W. Italy's response to vaccine hesitancy: an innovative and cost effective National Immunization Plan based on scientific evidence. *Vaccine* 2017;35:4057–9.
- 2 L. 31 luglio 2017, n. 119. Conversione in legge, con modificazioni, del decreto-legge 7 giugno 2017, n. 73, recante disposizioni urgenti in materia di prevenzione vaccinale. (G.U. 5 agosto 2017, n. 182). <http://www.gazzettaufficiale.it/eli/id/2017/08/5/17G00132/sg> (20 October 2017, date last accessed).
- 3 California Senate Bill (SB) 277 on 30 June 2015. Public health: vaccinations.
- 4 The Preventive Health Care Act (Präventionsgesetz). 25 July 2015. Germany.
- 5 Déclaration de politique générale de M. Edouard Philippe, Premier Minister. Assemblée nationale, mardi 4 juillet 2017. <http://www.gouvernement.fr/partage/9296-declaration-de-politique-generale-du-premier-ministre-edouard-philippe> (25 October 2017, date last accessed).
- 6 Signorelli C, Iannazzo S, Odone A. The imperative of vaccination put into practice. *Lancet Infectious Diseases* 2018;18:26.