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LETTERS

Italy, where a judge could decide the future of immunization policies
Italia, un Paese dove anche un giudice può decidere le politiche vaccinali

Dear Editor,

on October 2019, the Council of State (the most important legal-administrative consultative body, that ensures the legality of the activity of Public Administration in Italy) published the final judgment about the controversy on the use of pneumococcal vaccines for children in an Italian Region, Piemonte (1).

The Italian Immunization Plan (2) provides the active and free of charge offer of pneumococcal conjugate vaccine for all newborns (at 3, 5 and 11 months) and recommends "*to reach the maximum level of protection, considering the epidemiological pattern and circulating serotypes* (of *S. pneumoniae*)". Each of 20 Italian Regions/Autonomous Provinces is charged of vaccines purchase procedures and almost all Regions planned the use of 13-valent Pneumococcal Conjugate vaccine (Prevenar, Pfizer), that contains the antigens from pneumococcal serotype 3, 6A and 19A, not provided by the other available vaccine, the 10-valent pneumococcal vaccine conjugate with the nont-typable *Haemophilus influenzae* protein D (Synflorix, GSK). Only one Region, Piemonte, considered the two vaccines equivalent for Public Health strategies and opened a public tender using the lowest price as the selection criterion.

The decision of Piemonte was contested by Pfizer and two judgments, the first by the Piemonte Regional Administrative Judge and the second by the Council of State, were pronounced about the controversy. The Council of State finally decided that the two vaccines must be considered equivalent for the purpose of the current National Immunization Plan and authorized the use of Synflorix in Piemonte for the immunization of children.

The decision of the Council of State was based on two documents, from the Italian Ministry of Health and from the National Public Health Institute, that were requested of a specific opinion on the controversy.

The main reasons of the decision were:

- there are not conclusive data about the superiority of Prevenar on Synflorix, because Prevenar guarantees only a partial response against serotype 3 (3) and data about the cross protection induced by Synflorix against serotype 6A and 19A are available (4);
- epidemiological data from Italy showed a very limited number of cases of invasive pneumococcal disease due to serotypes 3, 6A and 19A among children, target of the questioned immunization strategy (5);

The Epidemiological Services of the Piemonte Region is in the position to guarantee high performance in the surveillance of infectious diseases and, in case of increase in the number of cases of pneumococcal invasive disease related to serotypes 3, 6A, 19A, a shift to the vaccine with higher number of antigens will be provided.

Epidemiological data considered by the Council of State regarded only the burden of diseases in children, but the epidemiological pattern of *S. pneumoniae* is more complex and the vaccination policies implemented for children have effects on other groups such as adults and in particular the elderly: more than 50% of cases of invasive pneumococcal disease in Italy regarded people aged >64 years and serotypes 3, 6A and 19A accounted more than 20% of cases in Italy (5).

A recent CDC statement showed that the US pediatric pneumococcal vaccination program, based on the use of Prevenar, has been successful in preventing disease in the young children through direct protection, as well as in unvaccinated populations through indirect effects. The incidence of invasive diseases related to the serotypes provided in PCV13 among subjects aged ≥65 years had declined ninefold during 2000–2014, before the start of PCV13 vaccination strategy targeted adults. During the same period, indirect effects of similar magnitude were observed among adults at increased risk for invasive pneumococcal diseases for chronic conditions or older age (≥85 years) (6).

In Finland, the extensive use of PCV10 resulted in an important decrease of the burden of pneumococcal diseases, but soon a replacement of serotypes included in the vaccine by other serotypes has been noted. A recent analysis showed that switching from a PCV10 to PCV13 program would reduce the burden of IPD of 32.9% but this switch has not been provided (7).

These evidences have not been considered in the decision of the Council of State, but its decision will affect the global epidemiology of pneumococcal diseases, with a decrease of the level of indirect protection for oldest people and for adults at high risk of pneumococcal complications, a very hard to reach group that could benefit of indirect effects of immunization.

Finally, it is contradictory, from a Public Health perspective, to wait for a future increase in the number of the cases of a vaccine preventable disease (yet controlled in the past) before starting with a new immunization strategy. Can we interrupt the offer of polio-vaccine or diphtheria vaccine, waiting for new indigenous cases of poliomyelitis or diphtheria in Italy? Even if poliomyelitis and diphtheria are different, by an epidemiological point of view, from pneumococcal diseases (e.g. for the risk of epidemic spread), the problem is the same: can we stop the vaccination for a disease controlled, but not eradicated, even if the surveillance has been strengthened?

However, this is a decision that could introduce a very concerned milestone for Public Health in Italy. For example, the Regional Administrative Judge of another Italian Region, Emilia Romagna, recently examined a similar controversy. Emilia Romagna Region had already decided the use of PCV13 for the immunization of newborns and bought the vaccine for 2018-2022 without public tender; GSK opposed this decision. The Judge examined the question and reported that there are no conclusive data justifying the choice of PCV13 instead of PCV10, and the decision of using PCV13 was related only to the precautionary principle. The Judge recommended the re-evaluation of the choice for the future and for these reasons established the duration of the contract with Pzifer until 2021 (instead of 2022) (8). Another controversy about the two vaccines has been recently examined by the Regional Administrative Judge of Region Lombardy (this controversy regarded only procedural concerns), and no decision has come yet.

According to the Italian Law, every judge is considered the major expert in all fields (*peritus peritorum*) and this sentence could condition the immunization strategies of all Italian Regions. However, even if from the literature there are not conclusive data on the head-to-head comparison between the two vaccines (9, 10), it is very strange (and, we think, never occurred in other countries) that the judge makes the final decision on the future of immunization strategies. The same decision could be more easily accepted, and in our opinion opportune and consistent, if pronounced by the National Immunization Technical Advisory Committee, of by the National Health Council

and exam of the evidences on the topic by national and international experts, rather than by an administrative Judge!

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