

SHORT ARTICLE

Meditations on the Italian population of low interest to the vaccination campaign against the pandemic from H1N1v. The point of view of the region

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Summary

In this article we developed a technical reflection on the organization of the National Pandemic Influenza A H1N1 variant plan, implemented in the Italian Region and in specific in the Local Health Agency Taranto. The audit has raised some critical issues that led to the limited success of the vaccination campaign. Among the critics it was really difficult to find quickly and easily those healthy individuals at risk for disease. There-

fore it raises the need to prepare a special population register as an essential preliminary step necessary for the active call of the target population in anticipation of a possible pandemic wave. In this vein, the Prevention Department of Taranto has developed a recording database system that has been experienced during the influenza vaccination campaign for the 2010-2011 season.

The first cases of H1N1 influenza virus variants have occurred in Latin America on April 2009, forcing the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) to raise the alarm for a new pandemic influenza by virus A, which heralded as highly contagious and rapidly spread throughout the world [1, 2].

As for the European area, the envisaged scenario by the European Center for Disease Control (ECDC) is a pandemic wave peak in late autumn.

With these premises, the same ECDC stated as a priority to implement all appropriate measures to reduce and mitigate the spread of influenza, in order to delay and flatten the epidemic peak, reducing the cases total number and consequently the burden on the healthcare system.

Even in Italy, in order of such claims, it proceeded to the preparation of the National Pandemic Plan assuming, in accordance with the precautionary principle, the worst-case scenario, (based on available data), in terms of morbidity and mortality in healthy population.

The Ministry of Health was responsible, therefore, to identify and agree with the Regional Health, activities and preventive care to ensure that throughout the country. In addition, together with the others Ministries involved, other support activities were prepared, aimed both to protect the community that to mitigate the impact on the national economy and the functioning of essential services, however, necessary for preparation and response to a pandemic.

The Regions and Autonomous Provinces were, thus, to assume, for each aspect of territorial jurisdiction – but

always in line with national guidelines and in consultation with the Ministry of Health – the responsibility of planning, preparation and maintenance of all skills and resources necessary to implement countermeasures about the influenza epidemics (for the stages of prevention, containment, response and recovery).

These ministerial guidelines for the implementation of the Pandemic Plan given to the regions, provided an articulated set of organizational activities. Among these, particular importance was given to the organization and effectiveness of the vaccination campaign, to be founded on some key elements: to provide the vaccine supply logistics, preparing the list of those healthcare professionals at risk as operators of essential services and healthy individuals; to identify methods of distribution and storage of vaccines, to organize the registration of vaccinations in view also of a complete and timely pharmacovigilance regional level [3].

Of course, it had expressly prepared a plan for monitoring the efficiency of actions and measures implemented with regard to what was expected.

The link between the central organs and the various devices of local health crisis unit was identified in the Regional Pandemic Committee, which had the role of coordinator.

The planning of an appropriate communication strategy (both in terms of content and timing) was identified as another key element of the Pandemic Plan, particularly on issues related to the promotion of the vaccination campaign which was recommended for an integrated use of media, based on a close working relationship with them [4].

However, despite these conditions and the operators of Public Health dedicated work, after one year from these events, it revealed the substantial failure of the vaccination campaign.

This phenomenon is common and similar in all Italian Regions, even in the presence of some levels of vaccine coverage area with slightly higher average values, however, resulted entirely insufficient to consider preventive action worthy of effectiveness.

There were no significant differences in the Regions, even with regard to the coverage levels achieved in the different categories of persons identified by the Ministry of Health as the main target of vaccination.

For example, within the categories of operators of essential services, the healthcare professionals immunization was higher, approximately 15%.

Similar trends were recorded in the healthy individuals categories, it has been vaccinated approximately 12% of patients with disease below the age of 65 years and women in the second or third trimester of pregnancy, all other categories showed lower immunization coverage.

The available data indicate also that there is no obvious correlation between the mode of vaccine supply and coverage achieved, since results are independent of the mode/strategy for conducting the vaccination.

The disappointing result is that, in Italy, was administered approximately 10% of doses of vaccine procured. In our view, this massive amount glaring failure to adhere to the vaccination can be attributed to different determinants. First of all three key factors (the activation and the content of the campaign institutional information, the availability of vaccine and the timing of recruitment of different target groups) resulted non-alignment compared to the evolution of influenza A H1N1 epidemic curve, as a matter of fact that the actual peak was earlier than expected.

There was an asynchrony between the optimal time for the start of vaccination and the onset of the influenza epidemic maximum incidence peak, in fact, they resulted coincident events.

Other critical issues identified are: the healthcare professionals showed lack of knowledge about of vaccinations value, which manifested itself, for this vaccine in particular, with the widespread belief that the vaccine was an investigational product which had not been sufficiently tested the effectiveness and safety.

The complex arrangements of informed consent did not facilitate the accession to that vaccination, owing to the dissonant health education campaign, sometimes inadequate to the user (such as the overly alarming content of the package insert).

Moreover, during the last pandemic, it was really difficult to find quickly and easily those healthy individuals, because of the lack of an appropriate list of names, in order to provide time in their active call.

As for the Puglia Region experience of extraordinary campaign of vaccination, the organizational and implementation skills were attributed to Services of Hygiene and Public Health of the Prevention Departments.

In this regard, the local crisis unit had the task of identifying people to be vaccinated as a priority, according to national guidelines, quantify and establish the procedures for vaccine supply.

About these aspects, it is stressed that even an estimate of the number of individuals at risk has led to considerable difficulties, founded on extrapolation from the exemptions ticket for disease, providing an approximate but no real population at risk number, in the absence of appropriate register.

Furthermore, in anticipation of a possible massive demand for vaccination, it set an organizational model based on local needs.

For example, the Local Health Agency Taranto - Prevention Department idea, using mathematical models about the potential vaccine supply, was to define some healthcare professionals teams, whose number and composition were proportional, from the type A team (for small towns with population < 15,000 inhabitants) to the type D team (for a population > 60,000 inhabitants).

Regarding the communication strategy, in parallel it was started a progressive information campaign, addressed at both general physicians and the population, pursued mainly in the field of school communities.

For this failing experience and in light of the factors that have led to it, now there is a need to establish a special population registers as an essential preliminary step necessary for the active call of the target population in anticipation of a possible pandemic wave.

In this context, the Prevention Department of Taranto has developed a recording database system that has been experienced during the 2010-2011 season influenza vaccination campaign.

The model started by the Prevention Department has seen the involvement of General physicians and Pediatricians, which, through a chorus of intent, have joined the program addressed to the setting-up of a computerized immunization registry of persons at risk.

To this end, it was made software that allows recording, for each patient candidate for vaccination, a series of pre-encoded information (by expanding the minimum set of indicators required at ministerial level) [5].

Through the application, each physician was able to monitor adherence to the campaign of his clients and to extrapolate a final statistical report of vaccinations for different type of vaccine and risk condition. All reports were subsequently forwarded to the Local Health Agency Taranto, Prevention Department and then aggregated and analyzed for statistical summaries of the case.

The program is still in break-in period, but from an initial survey, it shows a good percentage of adherences by the local Physicians with sufficient accuracy in the compilation of the report proposed, despite a certain degree of mismatch between the software and systems provided to some doctors.

In doing so we laid the foundation for appropriately facing a possible pandemic flu emergency, being able to extract the names of those at risk, as an indispensable element for their active engagement.

The system can also evaluate the relapse of the vaccination program in terms of “health” through the analysis and the intersection of vaccination data with those derived from ordinary sources (hospital discharge records and death records) for reasons related to influenza.

The synergistic alliance between those involved in the vaccination campaign, sensitive to the issue of primary prevention for those most vulnerable, is fundamental to promoting the adoption of this operational plan to minimize the negative consequences on social and health services of a pandemic emergency.

This system, when fully developed, could also facilitate monitoring of flu disease health spending – hospitalization, primary care, home care, purchase of the vaccine, related to reached immunization coverage.

This is also in the light of recent economic evaluations of drug flu vaccination programs made in Italian elderly population, which permits to deduce the efficiency and effectiveness of the flu campaign within an entire geographical area.

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