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Pharmacists and the reluctance to vaccines

Los farmacéuticos y la reticencia a la vacunación

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Vaccination is one of the most effective ways to prevent diseases. Currently, it prevents from 2 to 3 million deaths a year and 1.5 million deaths could be avoided if the global coverage of childhood immunization were improved[1].

The World Health Organization (WHO) has evaluated vaccine hesitancy, or refusal to be vaccinated, despite the availability of vaccines, as one of the top ten issues that will require attention and that of their partner countries in the field of health during the year 2019. Reluctance to vaccination, according to the WHO itself, threatens to reverse the progress achieved in the fight against vaccine-preventable diseases. Measles cases, for instance, have experienced an increase of 300% in the WHO European region during 2018. The reasons for this increase are complex and are not always due to the reluctance to get vaccinated. Some of Spain's neighboring countries with high levels of income (France, Italy, Greece), endowed with good healthcare systems and where lack of access to vaccination is not a problem, were very close to eliminating the disease, as in Spain (and still is). However, these countries have experienced measles resurgence, derived from the gradual but relentless decline in vaccination coverage rates, mainly due to an increased vaccine hesitancy and action groups against vaccination. This decrease in immunization rates has led to the loss of herd immunity and has encouraged the emergence of thousands of cases, including severe cases and deaths. From January 2018 to May 2019, 47 of the 53 countries in the WHO European region have reported a total of over 100,000 cases of measles, including more than 90 deaths[2].

The reasons why some people choose not to be vaccinated are complex. The WHO's advisory group on immunization identified complacency, the drawbacks to vaccines access and the lack of trust as the main reasons. We, the health workers, remain the most trusted by the people in decisions regarding vaccination. All of us, including of course the pharmacists, are the ones who must always provide current, reliable and credible information on vaccines to the population.

The scientific debate about vaccines, as hesitant groups to vaccination intend it to be raised, has been closed for some time: vaccines save millions of lives around the world and prevent diseases[3]. However, individuals and groups against vaccines repeatedly and publicly expressed false pretenses, half-truths and conspiracy theories and selectively use anecdotal evidence[4]. Their theories are based on false science, which always produces serious harm. Opposing groups or vaccination-alleged experts have never been able to provide sufficient solid or conclusive evidence in medical journals or scientific meetings, which does not even allow to confirm or refute their thesis.

The reasons for rejection or distrust of vaccines are various. Probably, the reasons that most contribute to this current phenomenon are those concerning the perception that citizens –and unfortunately, some health professionals– have about the safety of vaccines and on the real risks of the diseases they prevent. When confidence in vaccination decreases, indecision can lead to delays in vaccination or even to its rejection, which threatens the effectiveness of public vaccination programs and can cause disease outbreaks. Vaccines follow a rigorous process that involves development, production, marketing and post-marketing monitoring, which, of course, could be improved. If unexpected adverse reactions are detected, these are recorded and analyzed by the appropriate agencies. Any statements about the safety of vaccines requires an extensive scientific evaluation that should be explained by a qualified professional[5-9].

People and parents who reject or delay their children's routine immunization such as Spain, are usually well educated and try to learn about vaccines, either by asking health or non-health professionals, or, more usually, consulting on the Internet. There are webpages or videos from groups against vaccination that are easily found. They often use attractive titles –such as "Free vaccination league"–, and are based on anecdotal evidence, as well as the usual conspiracy theories –"pharmaceutical companies and governments should not be trusted–. These groups sometimes use narratives and personal stories, while healthcare professionals employ numbers or risk statistics that are not so attractive. Individuals and anti-vaccination groups have quickly learned the value of Internet, Twitter or Facebook, where apparently

every statement is valid. Several factors enhance the dissemination of this information, a phenomenon called social amplification of risk[10]. There is already enough evidence about the potential risks of spreading these beliefs or false rumors in social media, where safety or effectiveness of immunization are questioned, leading to potential consequences of not being able to stand up against these and protecting concerned people on time[11].

Fortunately, for the majority of the world's population, children and people are normally vaccinated. Immunization coverage levels in the recommended schedules or routines, are above 85-95% in European Union countries. This coverage allows us to keep the herd immunity from almost every disease for which we recommend vaccination. If the number of people or parents who choose not to vaccinate their children were to significantly increase from the current situation, herd immunity could be easily lost in geographical areas that are well vaccinated against other diseases, as has already happened with measles in France, Italy or Greece. It is true that unvaccinated children by their parents' decision continue to benefit from herd immunity generated by everyone else. Solidarity is not a principle for the parents opposed to immunization. By not vaccinating their children, they contribute to a higher risk for the population, and thus, make it more difficult to eliminate –and even eradicate– some infections, such as measles.

We should bear in mind and insist on the fact that the main and most trustworthy source of information on immunization is a healthcare professional. Convincing the genuinely undecided group of people (hesitants) and reinforcing on the goodness of making the decision to immunization are the main objectives to reach through this dialogue process. The key is to properly answer questions raised by the undecided parents as well as keeping the population's confidence in immunization, based on scientific evidence and on the reality of millions of vaccinated people.

To achieve and maintain confidence in vaccines, pharmacists can –and should– play an important role. They are experts in medicines, and therefore should be aware of the benefits, indications, possible side effects and risks of vaccines. They are in direct contact with the public, in hospitals and health centers with many other health professionals as well, such as during each annual influenza vaccination campaign[12,13]. They can set a good example for all citizens and professionals. To this end, besides always being up to date and collaborating with all healthcare professionals, they should properly deal with usual and recurring false myths on immunization: false statements on low effectiveness, alleged toxic content (such as mercury and aluminum), doubts about their safety (supposedly adverse effects and related diseases, such as autistic spectrum disorders, diabetes, cancer, autoimmune diseases or various neurological syndromes).

Health professionals have the scientific, ethical and deontological duty to recommend vaccination, provided that there are no medical reasons for not doing so. We have the ability to generate and maintain public confidence if we always explain the truth, the facts and evidence, including both real risks and benefits of vaccines. There is no vaccine that can guarantee a complete absence of risk, but this must be opposed to the benefits vaccination offers on the protection against the disease and its consequences. Pharmacists are an essential part of this training and informative activity[14].

False science is never harmless: it produces real harms, which we know about and we can prevent. Getting vaccinated means not only protecting yourself, but everyone as well.

Conflict of interests

Dr. Trilla has received honoraria as a consultant, advisor and/or speaker for GlaxoSmithKline, MSD, Sanofi Pasteur and Seqirus, and has participated as a researcher in clinical trials with vaccines Pfizer, GlaxoSmithKline, Sanofi Pasteur MSD, whose funds were paid to his institution.

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