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THE ROLE OF COMMUNICATION IN THE PRE-VACCINATION PERIOD AND DURING VACCINATION CAMPAIGN

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Vaccines are one of the most important public health achievements. However, vaccine coverage has been declining in recent decades and anti-vaccination movements are on the rise. Personal, social and cultural factors are the main determinants of the vaccination decision. The general population has access to a lot of information, but it is important that the population receives correct information. Thus, a good communication strategy is a defining element for a successful vaccination campaign.

Keywords: vaccination, vaccine hesitancy, communication

INTRODUCTION

"Vaccination is one of the ten great public health achievements of the 20th century. Vaccines have reduced the incidence of many vaccine-preventable diseases in the United States by more than 98% compared to the prevaccine era"[1]. Epidemics and pandemics are natural events recurring over the time. Vaccines represent the most important tools for controlling them[2]. However, today there is an impressive decline in population confidence in vaccines which is reflected in low vaccine coverage. In the absence of knowledge, many people think that vaccines are associated with serious side effects. In fact, in most cases the side effects are minor, and can rarely cause febrile seizures or severe allergic reactions[1,3]. In order to stop the anti-vaccine movements, it is necessary to implement effective communication strategies that reach as many population groups as possible[4].

VACCINE HESITANCY AND THE MAIN CAUSING FACTORS

Vaccine hesitancy is defined as "a delay in acceptance or refusal of vaccines despite the availability of vaccination services."[5]. Vaccination is the key element in preventing infectious diseases. However, for several vaccines, the vaccination rate is suboptimal. The World Health Organization considered vaccine hesitancy as one of the top ten threats to global health in 2019[6].

Studies have shown that the refusal of vaccines in recent years have led to outbreaks of varicella, pneumococcal disease, measles, *Haemophilus influenzae* type b disease, etc. Personal, social and cultural factors are the main determinants involved in vaccine hesitancy. Parents claim nonmedical exemptions (religious exemptions or philosophical reason) to school immunization requirements. In some situations, it is difficult to distinguish between safety concerns about vaccines or other reasons. In the last two decades, the rates of

nonmedical exemptions have increased alarmingly[7]. Parents who refuse to vaccinate their children mention as main reasons the fact that natural immunity is important, the proper hygiene makes the administration of the vaccine unnecessary or that the exposure to the disease can be controlled[8].

Very important elements that influence the patient's decision to get vaccinated are the way the medical provider transmits the information, his behavior, his knowledge etc. It is also important the time that the medical provider gives to the patient[9]. The communication skills of health care providers need to be improved in order to have a maximum effect. The 2017 Erice Declaration contains the main strategies underlying good communication; it was adopted during the period when vaccination became mandatory in Italy[5]. Vaccine hesitancy may be the result of the active involvement of the individual in decisions about his health[8]. In addition, behind the low vaccine coverage are the lack of information or misinformation[10].

In Romania, between 1998 and 1999, 2.1 million children were immunized against measles, as a result of an extensive vaccination campaign, without serious side effects and without refusals to vaccinate[11]. In recent years there have been concerns in the general population regarding the safety of vaccines. This problem also occurred with the implementation of HPV vaccination. However, extensive studies have been conducted in Denmark, Sweden, and France, including vaccinated women and have shown that the vaccine does not increase the risk of autoimmune diseases[12]. The introduction of new vaccines may be associated with resistance. That is why vaccination campaigns must be based on strict rules. For example, in Romania, the vaccination program initiated for HPV did not comply with such rules and the campaign was a failure[4]. That failure still has consequences today.

Enforcing mandatory vaccinations can be a way to increase vaccine coverage, in a context where anti-vaccination campaigns have emerged In Italy until 2017 only 4 vaccines were mandatory, and following the approval of the new law, the number of compulsory vaccines reached 10. Among European countries, eleven countries (35.4%) have mandatory vaccinations for at least one out of diphtheria, tetanus, pertussis, hepatitis B, poliovirus, *Haemophilus influenzae* type b, measles, mumps, rubella and varicella vaccine[10].

COMMUNICATION – A FUNDAMENTAL CONCEPT IN VACCINATION CAMPAIGNS

Pro-vaccination campaigns should focus on presenting the severity of the disease in conjunction with the benefits of vaccination. It is considered that the association of positive messages such as the benefits of vaccination with negative messages such as the consequences of lack of vaccination can lead to a good result[13].

The concept of segmentation is essential in vaccination campaigns. Segmentation involves identifying groups with the same habits, beliefs, attitudes and creating personalized interventions based on the target group[13]. Szilagy *et al.* conducted a randomized study on 164,205 individuals who received 1, 2 or 3 reminders about the influenza vaccine, and observed a small increase in the vaccination rate in the group of those who received a reminder compared to those who did not receive one. These results show that it is necessary to improve targeted patient motivational strategies[14]. Thus, four groups with vaccine deficit have been described, hesitant people, unconcerned people, active resisters and poor reached. For each group the approach should be different, focused on the characteristics of the group[15].

The 2009 AH1N1 virus pandemic revealed the effect of inefficient communication. In Canada, numerous messages have been sent to the population in order to persuade citizens to get vaccinated, but the vaccination rate has been low

(no more than 41%). Studies have shown that the information is accepted if it is in accordance with the beliefs of the population and if it is transmitted by an institution or a person that is considered competent. It should be kept in mind that people often do not trust government organizations[16]. It is thought that vaccination-related policy statements can have a different impact on a person depending on psychological reactance. Those with high reactance may be resistant to persuasive messages even if they agree with those messages considering that their autonomy may be violated. It can be difficult to identify these persons and health care providers need to be trained in this regard. These persons are parents who often refuse to administer preventive treatments to their children[17].

Two types of communication between doctor and parent were described, participatory communication and presumptive communication. Participatory communication is an approach based on dialogue, which allows the sharing of information and the parent can express his ideas and fears about vaccination. In the presumptive communication, the doctor explains to the parent the need for vaccination and convinces him in this regard, without a collaborative relationship in decision making. A participatory communication leads to a lower vaccination rate compared to the presumptive one, but with a higher satisfaction of the parent regarding the doctor-patient relationship[18,19]. The study by Opel *et al.* also showed that participatory training is associated with a higher refusal of vaccination but the patient-physician relationship is a better one[19]. One-on-one dialogue-based communication strategies are considered as the most effective strategies[20].

A meta-analysis that included 38 studies showed that parents want more information than they receive, and insufficient information can be associated with regret about the vaccination decision. Thus, poor communication with health care providers can cause negative effects on the vaccine status of children. In addition, the parents stated that they had difficulties in assessing and identifying reliable sources of information and most of them stated that they had the greatest confidence in the health care providers[21].

Over 80% of parents say that they receive information about vaccines from a physician and that the child's physician is an important person to talk to when they have concerns about vaccination and are confused regarding the vaccination decision. Consequently, the physician must have very good communication skills being a key player in the vaccination campaign. However, it should be emphasized that social media is increasingly influencing parents' decisions[12]. An eloquent example is related to Wakefield's articles on MMR vaccine, published in The Lancet in 1998, which contributed to an increased reluctance to the MMR vaccine in Ireland and the UK. False information about vaccination should be identified and combated. When an article with the potential to influence public opinion on vaccination is identified, The UK National Health System publishes it on their website and discusses whether the information is true or false. It is also necessary to create websites that provide accurate and complete information on vaccination. It is important for health care providers to focus on two-way conversations with parents to understand their worries and anxieties, and send them personalized messages tailored to their needs. Another problem is that health care providers are often not prepared to provide details about vaccine side effects, contraindications, ingredients, therefore it is necessary to be regularly informed[22,23].

A study conducted in Italy, which searched websites for the words, "vaccine" and "vaccination", found that 15.4% of them promoted an anti-vaccination attitude. This analysis also showed that the messages sent by non-governmental persons are more numerous than those provided by institutions[24]. Basch *et al.* analyzed 87 videos from YouTube using "vaccine

safety" and "vaccines and children" as keywords. A very large number of available videos (65%) induced the idea of anti-vaccination. Only 5.6% were produced by government professionals[25]. A recent systematic review analyzed health misinformation on social media. Health misinformation about vaccines was very frequent (43%), different levels of health misinformation were identified depending on the type of vaccine but the human papillomavirus vaccine was the most affected. Health misinformation was most common on Twitter[26].

Our recent study, which aimed to analyze knowledge and attitudes of the public regarding vaccination, included 1,647 participants, who completed a questionnaire. Most respondents had children and a positive attitude toward vaccination. Respondents who stated that they did not vaccinate their children according to the national vaccination scheme mentioned as main reasons the lack of information and the fear of side effects. Regarding the sources of information, the family physician (76%) was the most important information source, followed by internet sources (45%), family (31%), friends (28%), literature (25%) and other sources (12%) (4). Another study included mothers of new-born babies who responded to a questionnaire that assessed their vaccine attitude. It was observed that 20% had vaccine hesitancy, 49% stated that they had not been informed about vaccinations during pregnancy or postpartum, 25% stated that they had received immunization information from health care providers but also from non-medical sources. It was observed that those who participated in meetings about vaccination during pregnancy or postpartum had a better attitude towards vaccination than those who did not participate[27].

CONCLUSION

In conclusion, health care providers should represent the key players in communicating vaccination information. The main factors leading to vaccine hesitancy are lack of information and misinformation and, in this sense, social media seems to play an important role. Vaccination campaigns should be based on personalized strategies according to the target population. On the other hand, the position of the authorities is extremely important, which needs to be correct, without fault, rigorous and empathic, all at the same time. As confidence in vaccination has decreased, solutions are not purely administrative and problems can no longer be solved by drafting government decisions or laws. The citizens' trust can be regained through sustained efforts (both human and material), which must begin by coming down from their "ivory tower", to the level of the citizens. In this sense, there are activities already carried out within international projects (2) that need to be capitalized on. Pro-vaccination activities must be carried out in a timely, coordinated, scientific manner during periods of "epidemiological calm". But, if they are neglected, we can find ourselves in complex and complicated situations (such as the one we are living in now), even greater efforts are needed, adapted to the complexity and difficulty of today.

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