

# The Role of Pharmacies in Immunization Programs and Health Promotion

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## Abstract

The involvement of pharmacists and pharmacies in the vaccination campaign represents an important opportunity to confirm the professional role played and the function of a local health unit. The pharmacy is one of the points of contact and interaction most frequented by the population; it is widespread throughout the national territory, and thanks to its professionals, it plays and can play, even more, an essential role in the networks for the prevention and protection of the health of our communities. The SARS-CoV-2 pandemic has highlighted the necessity for close collaboration and integration between health professionals to ensure an influential response. The pandemic also made it clear how prevention is an essential component of our health and social systems and how this must find, alongside a precise and stronger organizational dimension, also a concrete and operational declination in the various aspects of our daily life and certainly in the moments of contact with the various health services. In this work, through an analysis of the scientific literature, we aim to identify and describe the advantages that can derive from the involvement of community pharmacists in prevention networks.

**Keywords:** Community pharmacy, Pharmacists, Immunization, Health promotion

## INTRODUCTION

One of the most influential public health interventions to prevent mortality and morbidity from vaccine-preventable diseases worldwide is vaccination. Despite this, immunization rates remain suboptimal in many countries, mostly because of the lack of adequate data, concerns about side effects, false beliefs, and vaccine reluctance among the people [1, 2].

Uncertainty about vaccination is a threat that can severely endanger its campaigns’ vaccination execution and success [3].

Anxieties, misinformation, and misunderstandings about immunization operations can cause various behaviors that postpone, delay, or even lead to vaccination refusal. Failure to achieve adequate vaccination coverage may result in pathogens and illness spread re-emergence.

The SAGE (Strategic Advisory Group of Experts) has identified the determinants of adherence to vaccination practice with the so-called “the 5A taxonomy”, i.e., access to health facilities (Access), the convenience of the vaccine in terms of financial and non-financial costs (Affordability), knowledge about vaccination significance (Awareness), its acceptance (Acceptance) and activation (Activation) [4], or complacency, comfort (Convenience) and trust (Confidence), defined as “the 3C model” [5].

Usually, vaccination campaigns see public health doctors, pediatricians, and nurses as protagonists. Other health professionals, including community pharmacists, have been included in immunization plans in countries like the USA to increase vaccination coverage rates. Since the mid-1980s, pharmacists have participated in “Pharmacy-Based Immunization Services” (PBIS) [6].

In Italy, unlike other countries, pharmacies had never been authorized to administer vaccines, despite the latest National Vaccine Prevention Plan underlining the necessity to undertake immunization plans with cooperative and unified methods between various health professionals [7]. The necessity for close collaboration between health professionals has been highlighted by the SARS-CoV-2 pandemic to ensure an effective vaccination response. The participation of

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pharmacists in the vaccination campaign is a crucial step toward the reorganization of territorial health, which must be based on the concept of proximity and on the synergy of all the professionals who work in the area daily. A paradigm shift in which the model of the service pharmacy has a central role, intended as a multifunctional health facility.

The community pharmacist is often in a privileged position both of dialogue with the population and the great level of confidence and trust that can be created in an ongoing relationship. Moreover, the community pharmacist can help in the identification of people who present particular risk factors or unhealthy lifestyles and can provide educational and counseling activities, addressing common misconceptions about vaccinations [8].

In light of the above and the analysis of the scientific literature, we aim to identify and describe the advantages that can derive from the participation of community pharmacists in prevention networks.

### *Community Pharmacists as Immunizers*

Community pharmacies can guarantee low and affordable costs for starting vaccination campaigns, being ready to face vaccination logistics with various strategies for managing the vaccine/injection supply chain. Pharmacies usually do not need appointments for vaccination services, enhancing immunization adherence rates [9, 10].

Pharmacists can also fight disinformation, communicate clearly and evaluate the patient's understanding, thus reducing vaccination hesitancy [11, 12].

Second, community pharmacists can help prevent public health crises. A recent survey of more than ninety-nine countries by the International Pharmaceutical Federation (FIP) indicated that pharmacy vaccination service was accessible in at least 36 countries while it was being proposed or was being implemented in 16 other countries [13, 14].

The most popular vaccines administered in pharmacies were the influenza vaccine, followed by hepatitis B, tetanus, diphtheria, measles, malaria, and the herpes zoster vaccine.

The involvement of the community pharmacist in the context of prevention campaigns can be implemented after carrying out specific training [15].

Community pharmacist training can include the study of the vaccine's epidemiology and immunology and the proper usage of protective equipment, proper maintenance and handling of the vaccine, and permanent monitoring of the qualified people.

Thus, community pharmacists can play different roles in immunization, namely that of distributors (providing and distributing vaccines and immunization products), educators

(improving knowledge about vaccines), administrators (practicing vaccination directly) [16, 17].

A cross-sectional study conducted in the province of Québec described the factors associated with administering the vaccine at the pharmacy and, among these, the presence of another healthcare professional in the pharmacy (such as a nurse), the increase in weekly opening hours (> 60), is located more than 1 km from a medical clinic, having a collaboration agreement with the public health unit, have been positively associated with the administration of the vaccine in a pharmacy. There is evidence from further studies that improving accessibility to the pharmacy, with the extension of opening hours, has an important positive effect on vaccination coverage [18].

It is also essential to emphasize the importance of maintaining the cold chain to maintain the maximum efficacy of the vaccine because vaccines are often sold to customers for administration elsewhere. This suggests that the vaccine is not always kept in optimal conditions, losing at least part of its effectiveness. This problem was highlighted in a survey describing the vaccination services provided by doctors' surgeries in Québec and suggesting the only solution is to administer vaccines on the premises where they are sold, to improve efficacy and patient comfort [19].

Pharmacists, as both administrators and educators, can increase the immunization campaigns success with a Relative Risk (RR) of 2.96 ([95% CI 1.02-8.59], k = 22 studies) and 2.64 ([95% CI 1.81-3.85], k = 14 studies), respectively. Generally, performing as administrators or educators, there is a positive influence of the pharmacists' role on the vaccination coverage rate (RR 2.74 [95% CI 1.58- 4.74]) [20, 21].

In 2017, a study found that US teens often, when talking to pharmacists, declared their interest in topics related to drugs and indicated an interest in the knowledge provided by pharmacists, particularly on vaccine-related issues, the effect of medicines on the body, their production, interaction, emerging research, and current scientific proof [22].

This perspective is specifically remarkable in teenagers among whom, for example, vaccination chances reduce as they are in a developmental phase where they are no longer subject to close monitoring by pediatricians and mostly do not need medical attention [23].

Over the years, obstacles to achieving suggested vaccination rates have been the shortage of interventions that enhance patient needs. Shortage of access to a source of regular care and opportunities for doctors to partner with alternative health professionals provide preventative health commendations. An alternative to address these obstacles is to take advantage of vaccinations at the pharmacy. Pharmacists and pharmacy assistance offer patients a cost-

effective and available option to immunization services. Pharmacists are seen as trusted healthcare professionals and are readily accessible to the public in rural and other areas with few healthcare professionals [24].

A very recent systematic review published in the *International Journal of Clinical Pharmacy* aimed to recognize the key success elements for the influential design and execution of vaccination practice in the pharmacy to improve acceptance rates for influenza vaccination. The results showed an enhancement in vaccination acceptance by up to 27% over the standard of care and up to 117% for those who did not receive the flu shot the previous year. It also emerged that allowing pharmacists to participate in vaccination campaigns can enhance the likelihood of vaccination acceptance and is a beneficial tool for offering adequate patient care. In particular, pharmacists' and patients' instant and direct communication strategies have largely contributed to increasing vaccination rates [25].

## CONCLUSION

The progressive reduction of trust in vaccination and the reduction in compliance with vaccine prophylaxis measures, with the subsequent decrease in the rate of active immunization, encourages the adoption of public health initiatives and interventions.

Integrating community pharmacy services into national vaccination plans could help increase awareness among the people, especially those at risk and vulnerable, and counter the spread of unfounded skepticism. It is of fundamental significance to establish interactions with all the actors who participated in immunization practices, from general practitioners to pediatricians of free choice.

This vision of public health must be based on complementarity and not on the competitiveness between the different professionals. All of them have a single goal, namely improving public health.

On the other hand, community pharmacies are local health services specified by high availability and capillarity. They can offer their skills in relational and management terms to make immunization campaigns effective.

Another remarkable benefit of the community pharmacist as a vaccinator is revealed by the opening hours of pharmacies, which can facilitate adherence to the vaccination practice for workers or for those living in rural and poorly served areas, for which access to points of vaccination as well as other health care facilities and services can be very challenging.

The current SARS-CoV-2 pandemic has underlined the necessity for close collaboration and integration between health professionals to ensure an effective response. The health emergency has made it clear how prevention is an essential component of our health and social systems and how this must find, alongside a precise and stronger organizational dimension, also a concrete and operational declination in the various aspects of our daily life and certainly in moments of contact with the various health services. Covid-19 can be considered one of the main "accelerators" for the evolution of

the health and service delivery system, from the forced adaptation of informatics systems for monitoring vaccinations, to the involvement of actors and territorial networks that they had never been directly involved in the administration of vaccines, while always contributing to prevention programs.

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