

Pharmacy-based vaccination

Recent developments, success stories and implementation challenges

2023



International
Pharmaceutical
Federation

Colophon

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Contents

Acknowledgements	4
Executive summary	5
Foreword	8
1 Introduction	9
2 Case studies and country updates	10
2.1 Australia.....	11
2.1.1 Section A: Clinical coverage of pharmacy-based vaccination.....	11
2.1.2 Section B: Key policies and regulations of pharmacy-based vaccination.....	12
2.1.3 Section C: Remuneration framework.....	13
2.1.4 Section D: Implementation processes.....	14
2.1.5 Section E: Impact of pharmacy-based vaccination.....	19
2.2 Belgium.....	22
2.2.1 Section A: Clinical coverage of pharmacy-based vaccination.....	22
2.2.2 Section B: Key policies and regulations of pharmacy-based vaccination.....	22
2.2.3 Section C: Remuneration framework.....	24
2.2.4 Section D: Implementation processes.....	24
2.2.5 Section E: Impact of pharmacy-based vaccination.....	26
2.3 France.....	27
2.3.1 Section A: Clinical coverage of pharmacy-based vaccination.....	27
2.3.2 Section B: Key policies and regulations of pharmacy-based vaccination.....	28
2.3.3 Section C: Remuneration framework.....	28
2.3.4 Section D: Implementation processes.....	28
2.3.5 Section E: Impact of pharmacy-based vaccination.....	29
2.4 Germany.....	30
2.4.1 Section A: Clinical coverage of pharmacy-based vaccination.....	30
2.4.2 Section B: Key policies and regulations of pharmacy-based vaccination.....	30
2.4.3 Section C: Remuneration framework.....	31
2.4.4 Section D: Implementation processes.....	31
2.4.5 Section E: Impact of pharmacy-based vaccination.....	32
2.5 Greece.....	33
2.5.1 Section A: Clinical coverage of pharmacy-based vaccination.....	33
2.5.2 Section B: Key policies and regulations of pharmacy-based vaccination.....	33
2.5.3 Section C: Remuneration framework.....	34
2.5.4 Section D: Implementation processes.....	34
2.5.5 Section E: Impact of pharmacy-based vaccination.....	36
2.6 India.....	37
2.6.1 Section A: Clinical coverage of pharmacy-based vaccination.....	37
2.6.2 Section B: Key policies and regulations of pharmacy-based vaccination.....	37
2.6.3 Section C: Remuneration framework.....	38
2.6.4 Section D: Implementation processes.....	38
2.6.5 Section E: Impact of pharmacy-based vaccination.....	39
2.7 Italy.....	40
2.7.1 Section A: Clinical coverage of pharmacy-based vaccination.....	40
2.7.2 Section B: Key policies and regulations of pharmacy-based vaccination.....	40
2.7.3 Section C: Remuneration framework.....	41
2.7.4 Section D: Implementation processes.....	41
2.7.5 Section E: Impact of pharmacy-based vaccination.....	42
2.8 Jordan.....	44
2.8.1 Section A: Clinical coverage of pharmacy-based vaccination.....	44

2.8.2 Section B: Key policies and regulations of pharmacy-based vaccination	44
2.8.3 Section C: Remuneration framework	45
2.8.4 Section D: Implementation processes	45
2.8.5 Section E: Impact of pharmacy-based vaccination	45
2.9 Lithuania	46
2.9.1 Section A: Clinical coverage of pharmacy-based vaccination	46
2.9.2 Section B: Key policies and regulations of pharmacy-based vaccination	46
2.9.3 Section C: Remuneration framework	47
2.9.4 Section D: Implementation processes	47
2.9.5 Section E: Impact of pharmacy-based vaccination	47
2.10 Norway	49
2.10.1 Section A: Clinical coverage of pharmacy-based vaccination	49
2.10.2 Section B: Key policies and regulations of pharmacy-based vaccination	49
2.10.3 Section C: Remuneration framework	49
2.10.4 Section D: Implementation processes	50
2.10.5 Section E: Impact of pharmacy-based vaccination	51
2.11 Romania	52
2.11.1 Section A: Clinical coverage of pharmacy-based vaccination	52
2.11.2 Section B: Key policies and regulations of pharmacy-based vaccination	52
2.11.3 Section C: Remuneration framework	53
2.11.4 Section D: Implementation processes	53
2.11.5 Section E: Impact of pharmacy-based vaccination	54
2.12 Country updates	55
2.12.1 Algeria	55
2.12.2 Latvia	55
2.12.3 Malta	55
2.12.4 Poland	56
2.12.5 Saudi Arabia	57
2.12.6 Tunisia	57
2.12.7 United Arab Emirates	57
3 Insight board discussion	59
3.1 Participants	59
3.2 Priority assigned by pharmacy organisations to pharmacy-based vaccination, and rationale	60
3.3 Current regulations, policies and barriers	62
3.4 Public perceptions and attitudes of other HCPs about pharmacists as vaccinators	66
3.5 Funding and reimbursement of vaccination services	67
3.6 Concluding remarks	68
3.7 Responses submitted in written text	68
4 Conclusion	72
5 References	73

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Executive summary

In 2020, the World Health Organization (WHO) launched the Immunization Agenda 2030, a global vaccination roadmap with an ambitious vision: to reduce mortality and morbidity from vaccine-preventable diseases, improve equity of access to vaccination, and increase immunisation coverage rates across all ages and special-risk groups, leaving no one behind.

For several years now, pharmacists have contributed to vaccination strategies for increased access and uptake in many parts of the world, not only by educating the population and raising awareness about the benefits of vaccination, but also by dispensing, administering and/or prescribing vaccines to eligible individuals, in jurisdictions with supporting legislation and regulations. These roles have particularly contributed to improving vaccination coverage rates among adults, as demonstrated in previous FIP publications. Adult vaccination, and particularly the immunisation of older adults, is an area where the convenience, accessibility and expertise of pharmacists can make an important difference as part of multidisciplinary prevention strategies that focus on the reduction of vaccine preventable diseases. Expanding vaccination pathways and diversifying vaccination providers by including pharmacists is also important considering the global shortage of skilled healthcare professionals, a strong pressure on primary care and general practice, and a need to increase vaccine uptake and vaccination coverage, more than ever.

The International Pharmaceutical Federation (FIP) aims to continue expanding its work from the past years in the area of vaccination, as highlighted by the multiple resources available in FIP's [vaccination dedicated webpage](#). In particular, FIP continuously advocates and monitors how the contribution of pharmacists to vaccination strategies evolves around the world.

This report provides an update in terms of qualitative insights on recent developments and success stories of pharmacy-based vaccination in several countries, as well as an overview of some of the challenges that some countries are still facing to introduce this valuable professional service by pharmacists.

The report also aims to uphold FIP's global and regional advocacy of vaccination-related roles by pharmacists, and to provide FIP member organisations with examples that can support their own process and advocacy. The report includes a compilation of 17 case studies and country updates by FIP member organisations from countries with remarkable recent developments in this area, followed by the report from an insight board (focus group) discussion with countries that are at different stages of introducing pharmacy-based vaccination or that are facing specific challenges to achieve this goal.

In summary, the principal findings of this report include the following:

- The response by the pharmacy profession to the COVID-19 pandemic by vaccinating populations in many countries was instrumental to effectively bringing the pandemic under control. Several countries introduced pharmacy-based vaccination schemes during the response to the pandemic, and this also provided a valuable opportunity for pharmacists to demonstrate their competence, accessibility and convenience to provide vaccination services. In some countries, this paved the way to the administration (and prescribing) of other vaccines by pharmacists, including vaccines against seasonal influenza, pneumococcal disease, herpes zoster and Tdap (tetanus, diphtheria and pertussis).
- An increasing number of countries leverage pharmacies as places to provide diversity and simplify vaccination pathways and providers. This is particularly important to improve vaccination coverage rates among adults, older adults and special-risk population groups, including people living with chronic non-communicable diseases, immunocompromised individuals and pregnant individuals.
- Several countries were successful in changing or expanding legislation to enable pharmacists to provide vaccination-related services, including vaccine administration and prescribing, which indicates that the advocacy efforts and persistence of national pharmacist organisations were fruitful.
- Training and subsequent demonstration of competence for the delivery of immunisation-related roles has been a cornerstone of the development of these services and achieving the support of regulatory authorities.

- There is a growing body of evidence of impact of pharmacy-based vaccination in terms of increased vaccination coverage rates and public satisfaction, but it is crucial to further increase the amount of published evidence in this area to support advocacy efforts with policy makers.
- Lack of third-party reimbursement of pharmacy-based vaccination, lack of read-and-write-access to vaccination registries, and resistance from other healthcare professionals are some of the main barriers to the development of vaccination services by pharmacists.

Table 1 summarises an overview of key elements from the case studies and country updates with regard to vaccine administration authority, prescribing authority and reimbursement models for pharmacy-based vaccination, and whether pharmacists have access to vaccination records.

These findings and the insights generously shared by FIP member organisations for this report may support other countries and organisations in developing country-specific and appropriate strategies to leverage pharmacists in the delivery of vaccinations, to better protect populations against preventable diseases.

Table 1. Summary of key elements of pharmacy-based vaccination from the case studies and country updates

Country	Administration authority			Prescribing authority			Third-party reimbursement for vaccination service			Access to vaccination records
	Influenza	COVID-19	Other vaccines	Influenza	COVID-19	Other vaccines	Influenza	COVID-19	Other vaccines	
Algeria	Yes	Yes	No data	Yes	Yes	No data	No data	No data	No data	Yes
Australia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Belgium	Yes	Yes	No data	Yes	Yes	No data	Yes	Yes	No data	Yes*
France	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Germany	Yes	Yes	No	Yes	Yes	No	Yes	No data	No	Yes
Greece	Yes	No	Yes	Yes	No	No	No	No	No	No
India	No	No	No	No	No	No	No	No	No	No
Italy	Yes	Yes	Yes	Yes	Yes	No data	Yes	Yes	No	No
Jordan	Yes	Yes	No	Yes	Yes	No	No	No	No	No
Latvia	Yes	Yes	No data	No data	No data	No data	No data	No data	No data	No data
Lithuania	Yes	Yes	Yes	No data	No data	No data	No data	No data	No data	No data
Norway	Yes	Yes	Yes	Yes	No	No	No	Yes	No	Yes
Poland	Yes	Yes	Yes	No	No	No data	Yes	Yes	Yes	No data
Romania	Yes	No	No	No	No	No	No	No	No	No
Saudi Arabia	Yes	No	No	No	No	No	No	No	No	No data
Tunisia	Yes	Yes	No data	Yes	Yes	No data	No data	No data	No data	No data
UAE	Yes	Yes	Yes	No data	No data	No data	No data	No data	No data	No data

*Pharmacists are yet to have complete access to medical records, but checking the vaccination status is possible in some regions via a shared pharmacy data network.

Foreword

The ever-evolving space of healthcare delivery has seen transformative changes with expanding roles of health professionals, particularly emphasised during the recent COVID-19 pandemic. Amid this, pharmacists have emerged not just as custodians of medicines but as core members of healthcare systems with a pivotal role in primary healthcare, who can lead global goals, particularly in the field of vaccination. This transformation is not just timely but essential, as the world grapples with a shortage of skilled health professionals, vaccine hesitancy and the sheer urgency of prevention of communicable diseases. Within this context, the International Pharmaceutical Federation (FIP) seeks to cast a spotlight on the critical roles of pharmacists in primary healthcare settings contributing to eradication of communicable diseases and ultimately reducing global disease burden and curbing antimicrobial resistance.

It is with great interest in the work focusing on pharmacy practice that we introduce this insightful report, "Pharmacy-based vaccination: Recent developments, success stories and implementation challenges". The launch of this report highlights the critical impact of pharmacy-based vaccination (PBV) programmes in reinforcing accessibility and timeliness of vaccinations in community pharmacy settings, vital for reducing disease prevalence and health risks globally across all ages and risk groups. The objectives outlined in this report closely align with FIP's Development Goals (DGs), especially DG16 (Communicable diseases), DG12 (Pharmacy intelligence), and DG13 (Policy development).

FIP wishes to deliver crucial insights into PBV, offering a comprehensive analysis of achievements, challenges and opportunities of PBV implementation through this report. The report provides an international overview of recent successful experiences reported by FIP member organisations in implementing or expanding the role of pharmacists in vaccination. It also explores the perspectives of other FIP member organisations that are currently advocating the introduction of PBV, to provide a better understanding of the challenges they may be facing and the strategies they are employing to overcome such challenges. The report provides descriptive insights utilising different methodologies that encompass case studies and discussion, culminating in rich narratives from various FIP member organisations, to which I express my personal gratitude for their generous contributions and collaboration in this publication. A literature review and a global survey of FIP member organisations will be conducted in the coming months, leading to the publication of complementary quantitative data and updates on PBV around the world, to sit alongside the present publication.

We have witnessed profound shifts in healthcare dynamics over the years, and this report is a timely testament to the growing capabilities within community pharmacists. It serves as a critical reminder of the positive outcomes achievable when we broaden the scope of practice of pharmacists and how healthcare policy changes can significantly impact public health.

In conclusion, this report aims to create action in advocacy. It champions the idea that pharmacists and pharmaceutical scientists worldwide can promote the prevention of communicable diseases and foster universal health coverage. It is with great hope that this report will inspire other healthcare professionals, healthcare decision-makers, and communities worldwide to advocate and participate in a more integrated approach to vaccination in primary healthcare — one where every pharmacist plays a pivotal role in steering the future of global health.

Together we can advance pharmacy worldwide.



Paul Sinclair
President
International Pharmaceutical Federation (FIP)

1 Introduction

In the evolving landscape of global healthcare, vaccination is considered one of the most successful preventive measures against a wide spectrum of infectious diseases. There are 25 or more available vaccines globally, ranging from diphtheria, tetanus, and measles to tuberculosis, influenza and, most recently, COVID-19 and the respiratory syncytial virus (RSV).¹ Vaccines are shown to reduce mortality associated with preventable infections, with 14.4 million deaths prevented in 2021 from COVID-19 alone² and 51.5 million deaths projected to be prevented between the years 2021 and 2030, with multiple types of vaccines combined.³

In 2020, the World Health Organization (WHO) launched the Immunization Agenda 2030, a global vaccination roadmap with an ambitious vision: to reduce mortality and morbidity from vaccine-preventable diseases (VPDs), improve equity of access to vaccination, and increase immunisation coverage rates across all ages and special-risk groups, leaving no one behind.⁴

Within this context, the integration of a variety of healthcare professionals, including pharmacists, into broader vaccination strategies against VPDs is warranted. Pharmacists can stand at the forefront as integral players in promoting vaccine coverage for their expertise, trustworthiness, convenience and accessibility to the community.⁵ The role of pharmacists often spans from educating the public to urge vaccine uptake, to building vaccine confidence and addressing concerns about vaccines, and to directly administering vaccines.⁶ Also, in an increasing number of jurisdictions across several countries, pharmacists are authorised to prescribe and administer vaccines, and the positive impacts of pharmacists on vaccine coverage are increasingly evident.⁷⁻⁹ In this regard, pharmacy-based vaccination (PBV) initiatives can significantly enhance vaccination coverage efforts and bolster public confidence in vaccines which is pivotal in mitigating the incidence of VPDs and protecting the most vulnerable groups.¹⁰⁻¹²

Despite the universal importance of vaccination, distinct challenges persist in the implementation and accessibility of PBV in various countries. Commonly encountered problems across the globe include regulatory hurdles,¹³ insufficient infrastructure, particularly vaccine supply,¹⁴ and vaccine hesitancy stemming from a lack of public education and circulating misinformation and disinformation.¹⁵ In addition, professional and remunerative boundaries with other primary healthcare practitioners pose significant challenges to the practicality and effectiveness of PBV implementation within community settings.^{6, 16, 17} Also, countries with a high prevalence of VPDs encounter significant hurdles to meet national vaccine coverage targets and ensure equitable access, hindering alignment with the WHO's global objectives.¹⁸ These challenges are often attributed to insufficient vaccine infrastructure and educational programmes necessary for fostering the role of pharmacists as immunisers.¹⁹⁻²²

It is crucial to identify strategies from countries or jurisdictions where PBV has been successfully implemented, to assist with sharing learning and experiences, particularly regarding regulatory, funding and professional frameworks, and leverage the advancement of PBV. However, there is a lack of up-to-date data, particularly from the post-COVID-19 period, regarding the global landscape and advancements in PBV practices.

This report aims to collate the nuanced qualitative descriptions of achievements and challenges experienced by different FIP member organisations, especially those recently adopting or expanding PBV. In the coming months, FIP plans to conduct and publish a literature review on the impact of PBV, and also a global survey and a further report with quantitative data and updates that will complement the present publication.

Taking a mixed methodology approach, including case studies (open response survey) and an insight board discussion (focus group methodology) and then analysing collective insights regarding the impact of global vaccination initiatives facilitated by pharmacists, this report ultimately aims to advocate pharmacists' vital contribution to vaccination and the reduction of VPD worldwide.

2 Case studies and country updates

Chapter 2 provides a compilation of case studies received from FIP member organisations and other country updates developed by the FIP team regarding the current situation of pharmacy-based vaccination. The case studies are based on an open response structured survey and include information on the clinical coverage of PBV, such as the types of vaccines that are available and the eligibility criteria for the pharmacy-based administration of those vaccines. Further, the case studies describe key policies and regulations of PBV such as the access to vaccination records, prescribing authority or recent changes in legislation that enabled a broader role by pharmacists in this area. A following section of the case studies describes the financial remuneration of vaccination services by pharmacists and particularly the existence of any third-party reimbursement models. Another section focuses on the implementation process of PBV in order to understand the sequence of key events and milestones that led to the introduction or expansion of PBV in each country/jurisdiction, as well as relevant strategic insights that were employed to build collaborations and stakeholder support. A final section focuses on the impact of PBV and any evidence generated in each country related to the variation in vaccination coverage rates, the satisfaction of the public with the service and any other relevant outcomes of PBV. Our member organisations provided 11 case studies from Australia, Belgium, France, Greece, Germany, India, Italy, Jordan, Lithuania, Norway and Romania.

In addition to the case studies received, the report provides updates on six additional countries with relevant recent developments in terms of PBV, namely, Algeria, Latvia, Malta, Poland, Saudi Arabia, Tunisia and the United Arab Emirates. These updates were written by the FIP team based on desktop research about selected countries where PBV developments were identified.

2.1 Australia

Member organisation	Pharmaceutical Society of Australia
Author	Peter Guthrey

2.1.1 Section A: Clinical coverage of pharmacy-based vaccination

1. Authorised vaccine types, population groups and vaccinators for pharmacy-based vaccination

Vaccine type	Eligible population	Eligible personnel for vaccine administration
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See table below: “Pharmacist immuniser formulary — 1 November 2023”

Pharmacist immuniser formulary – 1 November 2023

Vaccine	ACT	NSW	NT	Qld	SA	Tas	Vic	WA
Influenza	5+ ¹	5+	10+	All ¹	5+	5+	5+	5+
dTpa	12+	5+	16+	2+	10+	16+	12+ ⁴	11+ ^{9,10}
MMR	12+	5+ ⁵	16+	2+	10+	16+ ⁴	15+ ⁵	11+ ^{5,9}
COVID-19	5+	5+	All	All	5+	5+	All	All
Cholera	-	-	-	2+	-	-	-	-
<i>Haemophilus influenzae</i> type B	-	5+	-	2+	10+	-	-	-
Hepatitis A	5+	5+ ⁷	-	2+	10+	-	5+	-
Hepatitis B	5+	5+ ⁸	-	2+	10+	-	5+	-
Meningococcal ACWY	14+	5+ ^{3a}	-	2+	10+	-	15+ ⁵	11+ ^{9,10}
Meningococcal C	-	5+	-	2+	-	-	-	-
Meningococcal B	-	5+	-	2+	10+	-	-	-
Pneumococcal	-	-	-	2+	-	-	50+	-
Herpes zoster	50+ ¹¹	18+ ¹¹	-	2+	50+	-	50+	-
Varicella (chicken pox)	-	5+	-	2+	10+	-	50+	-
Poliomyelitis	5+	5+ ^{3b}	-	2+	10+	-	5+	-
Human Papillomavirus	12+	9+ ^{3c}	-	2+	10+	-	12+	11+ ^{9,10}
Japanese Encephalitis	-	5+	All	2+	5+	-	5+	-
mPox	-	-	18+	-	-	-	5+	-
Typhoid	5+ ¹²	5+ ¹²	-	2+	-	-	5+	-

Green: NIP/Commonwealth/state funded
Grey: Private vaccines only

Funding limitations:

- 65+ years only, pregnant women, Aboriginal and Torres Strait Islander people aged 6 months and over
- Intentionally blank
- NSW: (3a) 15-19 years only, (3b) 5-19 years (3c) 12-25 years only

Additional populations funded by state programs (where not covered by NIP):

- Partners of pregnant women, parents or guardians of babies aged <6 months
- People born in 1966 and onwards, women planning pregnancy or post-partum with low or negative rubella antibody levels
- Catch up of missed doses for all people <20 yrs age
- Hepatitis A post exposure
- Hepatitis B (NSW) Per GP schedule
- Adolescent catch-up for school program missed dose

Population or vaccine limitations:

- Persons aged 11-15 years can only be vaccinated by a pharmacist in accordance with the current Western Australian Immunisation Schedule
- Shingrix brand only
- Intramuscular injection only

Details

See table above “Pharmacist immuniser formulary — 1 November 2023” relating to legal authority — responses vary between jurisdictions and ages.

Eligibility for government funded vaccines, and their availability via community pharmacies is variable. Details of vaccines available via the National Immunisation Programme (NIP) are available in this [LINK](#).

Further information regarding state programmes is available on request.

Pharmacists are required to adhere to the [National Immunisation Handbook](#) and, for [influenza](#) and [COVID-19](#), Australian Technical Advisory Group on Immunisation (ATAGI) recommendations for eligible populations to administer vaccines to.

Pharmacists who have completed pharmacist immuniser certification are able to administer vaccines in community pharmacies. Some jurisdictions permit administration of vaccines by pharmacist immunisers in other locations such as hospitals, residential aged care facilities, Aboriginal Community Controlled Health Organisations, general practices (medical centres) and outreach services. More detailed description of this authority available on request.

2.1.2 Section B: Key policies and regulations of pharmacy-based vaccination

2. Presence of prescribing authority for vaccines and access rights to patient’s vaccination records

Prescribing authority	Yes
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Accessing medical records	Yes
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Details:

Pharmacists must review a patient’s Australian Immunisation Register (AIR) record prior to administering a vaccine. This is a critical step in determining clinical suitability and eligibility for vaccination.

Pharmacists do not have authority to issue a written order for another immuniser to supply and/or administer.

Pharmacists must also upload each vaccine administration event to the person’s AIR record.

The AIR combines previous registers for childhood vaccination and human papilloma virus.

All vaccine providers are now required to upload details of all vaccine administration events for NIP vaccines, influenza vaccines and COVID-19 vaccines. Pharmacists are also required to upload all vaccine events to AIR by state/territory regulation.

3. Practice and legislative changes in recent times

a. Changes to practice guidelines and/or legislative requirements	<p>The Pharmaceutical Society of Australia has developed and maintained Practice guidelines for pharmacists providing immunisation services which were last updated in May 2020.</p> <p>Extensive updates to regulatory requirements — See timeline.</p>
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b. Changes to training requirements and certification	<p>The Australian Government removed the requirement for health professionals to undergo mandatory training to administer COVID-19 vaccines on 1 November 2023.</p> <p>Pharmacist immuniser training must be recognised by the state/territory government in the jurisdiction the pharmacist is practising in. The PSA, as the largest training provider, continually streamlines these training packages to eliminate variation in content between jurisdictions as much as possible. Pharmacists immunisers can now use their qualification when they practise interstate in most jurisdictions.</p>
c. Changes to requirements for vaccination premises	<p>Premises requirements have not substantially changed — the locations pharmacists are permitted to administer vaccines has broadened — see timeline.</p>
<p>4. Regional variations in regard to the regulations and requirements.</p>	
<p>Yes — see “Pharmacist immuniser formulary — 1 November 2023” above.</p>	

2.1.3 Section C: Remuneration framework

5. Financial reimbursement or billing procedures to cover pharmacy-based vaccination services including the details of third-party payers.

Governments provide NIP vaccines free of charge to service providers through state and territory health department ordering systems. Pharmacists must provide these vaccines free of charge to consumers. Pharmacists are able to charge a consultation/administration fee, except where there is government reimbursement for this. Examples include:

- **COVID-19:** Community pharmacies are provided free COVID-19 vaccines and are funded an administration fee for each vaccine administered. The current fee (2023) is AUD 27.35 (urban locations) and AUD 30.50 (regional, rural and remote locations). There are additional incentive payments for off-site vaccination (AUD 122.40 per site visit). Some state governments and commissioning bodies have introduced other temporary incentives for administration of COVID-19 vaccines. For example, during acute phases of COVID-19 vaccine roll-out, the [Victorian state government introduced one-off grants](#) of AUD 4,000 to accelerate vaccine update in priority locations.
- **“Free flu programmes”:** Since 2022, some state and territory governments have run one-off programmes to encourage individuals to take up influenza vaccination. Remuneration for these programmes varies between jurisdictions, but is directly funded by state/territory governments. For further detail, see timeline.
- **Japanese encephalitis:** Following outbreaks of Japanese encephalitis in agricultural regions of New South Wales, Victoria and South Australia in 2022, state governments authorised and funded pharmacist immunisers in community pharmacies in affected locations to administer Japanese encephalitis vaccines, including AUD 20 per JEV vaccine administered in [South Australia](#).

From 1 January 2024, the [Australian Government will remunerate community pharmacies](#) AUD 18.85 per NIP vaccine administered to a person over the age of five years.

In Australia, private health funds are currently not involved in funding community pharmacy service provision such as vaccination.

2.1.4 Section D: Implementation processes

6. Brief timeline of the implementation process in chronological order.	
Date	Event (key events in bold)
December 2013	Pharmacy Board of Australia announced vaccination was within the current scope of practice of pharmacists.
April 2014 to 30 September 2014	Queensland Pharmacist Immunisation Pilot (QPIP) Phase 1: <ul style="list-style-type: none"> 80 pharmacies 10,889 influenza vaccines administered
November 2014	Western Australia: Legislative change to allow pharmacist immunisers to administer influenza vaccines
February 2015	Australian Pharmacy Council develops vaccination training accreditation standards
~ 2015	Pharmaceutical Society of Australia develops Practice Standards for Pharmacist Administered Immunisation
March 2015 to April 2016	Queensland Pharmacist Immunisation Pilot (QPIP) Phase 2: <ul style="list-style-type: none"> 200 pharmacies 22,835 influenza, 1834 pertussis and 33 measles vaccines administered. Addition of pertussis and measles vaccines
2015	Pharmacist administered immunisation in South Australia and Western Australia introduced
June 2015	NSW: Pharmacist administered immunisation for influenza introduced
March 2016	Australian Capital Territory (ACT): Pharmacist administered immunisation for influenza introduced
March 2016	Queensland: Pharmacist immunisation for influenza introduced
April 2016	Tasmania: Pharmacist immunisation for influenza introduced
August 2016	Victoria: Pharmacist immunisation introduced in Victoria, including influenza and pertussis vaccines. NIP and state government programme vaccines available through community pharmacies — the first jurisdiction in Australia to do so.
January 2016	Northern Territory: Pharmacist immuniser formulary expanded to include pertussis and measles (MMR).
May 2017	Queensland: Five state government departments fund workforce influenza vaccination programme through community pharmacies.
June 2017	The PSA adds immunisation services into the Professional Practice Standards for pharmacists (version 5).
June 2017	ACT: Pharmacist immuniser formulary expanded to include pertussis (dTPa).
October 2017	Training: Over 6,790 pharmacists had completed the PSA's pharmacist immuniser training programmes. This meant over 22% of Australia's 30,622 registered pharmacists (2017) had become pharmacist vaccinators through the PSA.
July 2018	Tasmania: Pharmacist immuniser formulary temporarily expanded to include meningococcal vaccines to support public health outbreak response.
August 2018	Advocacy: National wide polling (n=1,023) by YouGov Galaxy finds 64% of Australians support pharmacists administering common vaccines, with greater convenience cited as a benefit by 62% of respondents.
August 2018	Victoria: Pharmacist immuniser formulary expanded to include measles (MMR) vaccine for people 16 years age and above.

	Pharmacist immuniser formulary reduces minimum age for all permitted vaccines from 18 to 16 years of age.
October 2018	NSW: Pharmacist immuniser formulary expanded to include pertussis (dTpa) and measles (MMR) for people from 16 years of age from 1 January 2019.
April 2019	Queensland: Pharmacist immuniser formulary lowers minimum age for vaccines to 16 years.
April 2019	ACT: Pharmacist immuniser formulary lowers minimum age for vaccines to 16 years.
May 2019	Tasmania: Pharmacist immuniser formulary lowers minimum age for influenza vaccine to 10 years.
August 2019	Western Australia: Pharmacist immuniser formulary expanded to include pertussis, measles and meningococcal (ACWY)
September 2019	Tasmania: Pharmacist immuniser formulary expanded to include dTpa and MMR (16+ years of age only)
October 2019	Victoria: Pharmacist immuniser formulary lowers minimum age for influenza vaccine from 16 to 10 years of age.
February 2020	Queensland: Pharmacist immuniser formulary expanded to include travel vaccines, including cholera, Haemophilus influenza type B, hepatitis A, meningococcal ACWY and poliomyelitis to people aged 16 years and above. Pharmacist immuniser formulary reduces minimum age for influenza vaccines to 10 years.
March 2020	NSW: Pharmacist immuniser formulary lowers minimum age for influenza vaccine to 10 years.
March 2020	South Australia: Pharmacist immuniser formulary lowers minimum age for influenza vaccine to 10 years.
March 2020	Victoria: Pharmacist immuniser formulary expanded to include meningococcal ACWY vaccine. Pharmacist immuniser formulary lowers minimum age for influenza vaccine to 10 years. Pharmacist immuniser formulary lowers minimum age for MMR and pertussis vaccine to 15 years. Pharmacist immunisers permitted to administer vaccines via mobile and outreach services of a hospital, pharmacy or pharmacy depot.
May 2020	NSW: Pharmacist immunisers permitted to administer vaccines in additional settings: residential aged care settings, Aboriginal Medical Services, private and public hospitals, and community health centres.
June 2020	Northern Territory: Pharmacist immunisers permitted to administer vaccines in additional settings: residential aged care settings, Aboriginal Medical Services, private and public hospitals. Pharmacist immuniser formulary lowers minimum age for influenza vaccine from 16 to 10 years of age.
November 2020	Western Australia: Pharmacist immunisers permitted to administer vaccines in additional settings: residential aged care settings, Aboriginal Medical Services, private and public hospitals
2021	State and territory governments progressively authorise pharmacists to administer COVID-19 vaccines. These authorities are revised regularly following changes to vaccination advice (e.g., vaccine brands, eligible age cohorts, booster doses, precautions etc.)
April 2021	NSW: State government extends access to NIP influenza vaccines to include community pharmacies
June 2021	Queensland: Rural pharmacists become the first community pharmacists to administer COVID-19 vaccines. Community pharmacies in other jurisdictions join the COVID-19 vaccine response in subsequent months.
December 2021	Remuneration for COVID-19 booster doses increases from AUD 16 to AUD 26 per vaccine administered.

March 2022	Tasmania: State government extends access to NIP influenza vaccines to include community pharmacies.
April 2022	Queensland: Pharmacist immuniser formulary lowers minimum age for influenza vaccine to five years of age.
April 2022	Western Australia: Pharmacist immuniser formulary lowers minimum age for influenza vaccine to five years of age. State government extends access to NIP influenza vaccines to include community pharmacies. Pharmacist immuniser formulary expanded to include: human papillomavirus (HPV), diphtheria-tetanus-acellular pertussis (dTpa), meningococcal ACWY and measles-mumps-rubella (MMR).
May 2022	Governments in South Australia, Western Australia, New South Wales and Victoria introduce a “free influenza vaccine” programme for 2022 where all persons — not just NIP eligible Australians — can access free influenza vaccines in community pharmacies. In addition to funding the vaccine, the state governments also fund the administration fee of these vaccines for the first time. Tasmania makes a similar announcement in early June 2022.
May 2022	South Australia: Pharmacist immuniser formulary lowers minimum age for influenza vaccine to 5 years age.
May 2022	NSW: Pharmacist immuniser formulary expanded to include: human papillomavirus (HPV) and meningococcal ACWY to support School Vaccination Programme.
May 2022	Victoria: Pharmacist immuniser formulary expanded to include Japanese encephalitis in response to local outbreak.
October 2022	South Australia: Pharmacist immuniser formulary expanded to include: Japanese encephalitis as part of state government programme in response to local outbreak.
October 2022	Victoria: Pharmacist immuniser formulary expanded to include monkey pox as part of state government programme in response to global outbreak.
November 2022	Western Australia: State government extends access to NIP vaccine access in community pharmacies to all vaccines pharmacist immunisers are authorised to administer
March 2023	Tasmania: Pharmacist immuniser formulary lowers minimum age for influenza vaccine to five years.
April 2023	Western Australia: State government announced free influenza vaccine campaign for 2023.
May 2023	Federal Minister for Health and Ageing announces community pharmacists will be funded to administer NIP vaccines from 1 January 2024 with a AUF 19 administration fee. (NIP vaccines are provided to vaccine providers free-of-charge)
July 2023	Queensland: State government announced free influenza vaccine campaign for 2023.
October 2023	NSW: Update to pharmacist immuniser formulary to align with NIP eligibility for shingles vaccine, meningococcal vaccine among other administrative updates.
October 2023	Queensland: Pharmacist immuniser formulary expanded to include: hepatitis B, varicella (chickenpox), meningococcal B, human papilloma virus (HPV), typhoid fever, zoster (herpes zoster) and Japanese encephalitis. Pharmacist immuniser formulary lowers minimum age for most vaccines to two years. Pharmacist immunisers permitted to administer vaccines in additional settings: general practices, Aboriginal or Torres Strait Islander health services, and aged care facilities.

November 2023	Queensland: State government announced free influenza vaccine campaign for 2024.
November 2023	Victoria: Community Pharmacist Statewide Pilot of travel health service scheduled to commence, including expanded authority for travel health vaccines
<p>7. Strategies used to build initial collaboration and ongoing support with key stakeholders throughout the implementation process.</p>	
<p>a. Non-pharmacist health professional groups</p>	<p>While policy decisions on regulatory changes (authority to prescribe and administer) are ultimately a decision for state and territory health ministers and/or departmental officials, stakeholders from non-pharmacist health professional groups have been present during some working groups related to pharmacist-initiated vaccination in an advisory capacity.</p> <p>Some non-pharmacist health professional groups have issued statements of support for specific aspects of growth for pharmacist-led vaccination, such as pharmacists practising in general practices (medical centres).</p> <p>Multidisciplinary stakeholder meetings with governments were a routine occurrence through the COVID-19 pandemic, which included extensive discussion of vaccine roll-out. These meetings were positive and collaborative to empowering the collective role of the vaccinator workforce.</p>
<p>b. Policymakers at national/ministerial level</p>	<p>Early engagement focused on identification of current underachievement of adult vaccination coverage and sharing international evidence of pharmacist-led vaccination overseas.</p> <p>Following the QPIP pilot results, ongoing liaison with government representatives in every jurisdiction has focused on addressing gaps in Australia's vaccination coverage and how pharmacists can support the closing of this gap.</p> <p>Interstate regulatory inconsistency has been a key driver of advocacy as the safe provision of vaccination in other states has been key to allaying concerns of risk associated with policy decisions.</p> <p>Policy commitments relating to vaccination funding and authority have not involved formal agreements with governments.</p>
<p>c. The public</p>	<p>The Australian public have driven demand for pharmacist-administered vaccination services through the convenience of access to a service from a health professional they trust.</p> <p>Initially, nursing services provided pop-up clinics in a number of community pharmacies. There was strong demand for these services, with strong consumer acceptance of a transition of these models to a pharmacist-administered model for influenza vaccination.</p> <p>Demand for pharmacist-immunisation services has been stimulated by:</p> <ul style="list-style-type: none"> • Television advertising by community pharmacy banner groups advertising pharmacist-administered influenza vaccination services • Inclusion of pharmacists in government messaging on vaccination, such as annual influenza season launch, COVID-19 press conferences, TV advertising for COVID-19 vaccines etc.



	<ul style="list-style-type: none"> • Social media and website marketing from community pharmacies advertising availability of various vaccine services • Broadcast news and current affairs services interviewing pharmacists — including where government announcements have been made in community pharmacies • Word-of-mouth <p>This was particularly marked during the COVID-19 pandemic, where community pharmacies added substantial surge capacity to Australia’s COVID-19 vaccine programme in late 2021 and beyond.</p>
<p>d. Pharmacists and pharmacy technicians</p>	<p>Stakeholder organisations, including the PSA, have strongly advocated the value, role and need for pharmacist-administered vaccines to the profession through direct communication, industry journals, provision of education, provision of resources, support through the PSA’s member-only Pharmacist to Pharmacist Advice line and broader media messaging.</p>

8. Key activities that led to the success of pharmacy-based vaccination.

The Pharmaceutical Society of Australia has been a key driver of implementation of expanded pharmacist-administered vaccination in Australia.

The PSA worked collaboratively with all stakeholders from the initiation of the QPIP Pilot to support establishment of training, practice, regulatory and research frameworks for pharmacist-administered vaccination.

The PSA, as the custodian of the profession’s standards and guidelines, developed standards and guidelines for pharmacist administered vaccination. These guidelines were updated in 2020.

The PSA is the largest provider of immunisation training to pharmacists. It implemented jurisdiction-specific training programmes to confer certification which allows pharmacists to prescribe and administer vaccines. This training has been revised continuously to maintain its currency and minimise state-to-state variation, allowing portability of skills to other states.

The PSA’s advocacy has been comprehensive and sustained. It has been a multi-modal approach, which has harnessed the power of our state and territory networks, as well as coordinated through a national policy unit. Strategies used have included:

- Face-to-face meetings with health ministers, chief health officers, departmental representatives and ministerial staff at every opportunity
- State and federal budget submissions
- Extensive internal collaboration
- Media releases
- Social media
- Journal articles
- Thought leadership at conferences and events
- Written submissions to government-led consultations
- Amplification of vaccination research and results

9. Challenges that pharmacists encountered during the implementation process, either at an individual, local or organisational level.

Implementation has been an iterative process as regulations and demand have continuously changed and evolved. Some of the major challenges have included:

- **Unable to meet consumer demand:** this is due to varying factors, such as:
 - Limited authority to prescribe and administer to specific populations or in specific locations,

- Unavailability of vaccines at a time consumers expect them (e.g., at the start of influenza season, or during the COVID-19 vaccine roll-out),
- Competing pressure for pharmacists' time (resulting in a shift away from "walk-up" vaccine services to an online booking for an appointment model),
- Inability to provide government-funded (e.g., NIP) vaccines.
- **Patient confusion on funding arrangements:** variation between funding arrangements for general practice and community pharmacy, or between vaccines (e.g., COVID-19 and influenza) has been a source of patient confusion which takes time to work through and can lead to an expectation gap for patients.
- **Inadequate remuneration:** Inconsistent remuneration for NIP vaccines, and administration fee, between different vaccine providers (e.g., medical doctors vs nurse practitioners vs council nurses vs pharmacists) has been a challenge. NIP administration payments from 2024 will go some way to addressing this imbalance.
- **Lack of consultation room:** vaccinations must occur in a private space, with regulatory requirements effectively now requiring a consultation room which is fit-for-purpose. While now common, many community pharmacies did not have designated consultation rooms prior to volume of vaccine administration justifying investment. This is largely no longer a barrier.
- **Manual recording systems:** Prior to widespread computerisation of vaccine services in community pharmacy, records management was manual and required double entry of data if reviewing and uploading to the Australian Immunisation Register. This process is now automated through clinical software systems.
- **Compliance obligations:** Inability to transfer pharmacist immuniser certification interstate, display of training certificates, restrictions on pharmacist interns administering vaccines, locations vaccines can be administered, and other administrative requirements have limited uptake of pharmacist-led vaccination somewhat. Many inefficient and unnecessary compliance obligations have been progressively removed.

10. Future strategies for further advancing pharmacy-based vaccination.

Pharmacists are now an integral part of Australia's immuniser workforce. The PSA will continue to advocate further removal of regulatory, funding and structural barriers which currently restrict pharmacists from authorising and administering some vaccines.

The PSA promotes nationally consistent regulatory and funding arrangements which would support pharmacist-initiated vaccination for:

- **All people:** including removal of regulated minimum ages for pharmacists to authorise and administer vaccines;
- **All vaccines:** including removal of specific regulated formularies for pharmacist immunisers; and
- **All locations:** removing regulated restrictions of practice settings.

Previous strategies which have been effective in advancing pharmacist-led vaccination will continue to be a focus of advocacy work in the future.

2.1.5 Section E: Impact of pharmacy-based vaccination

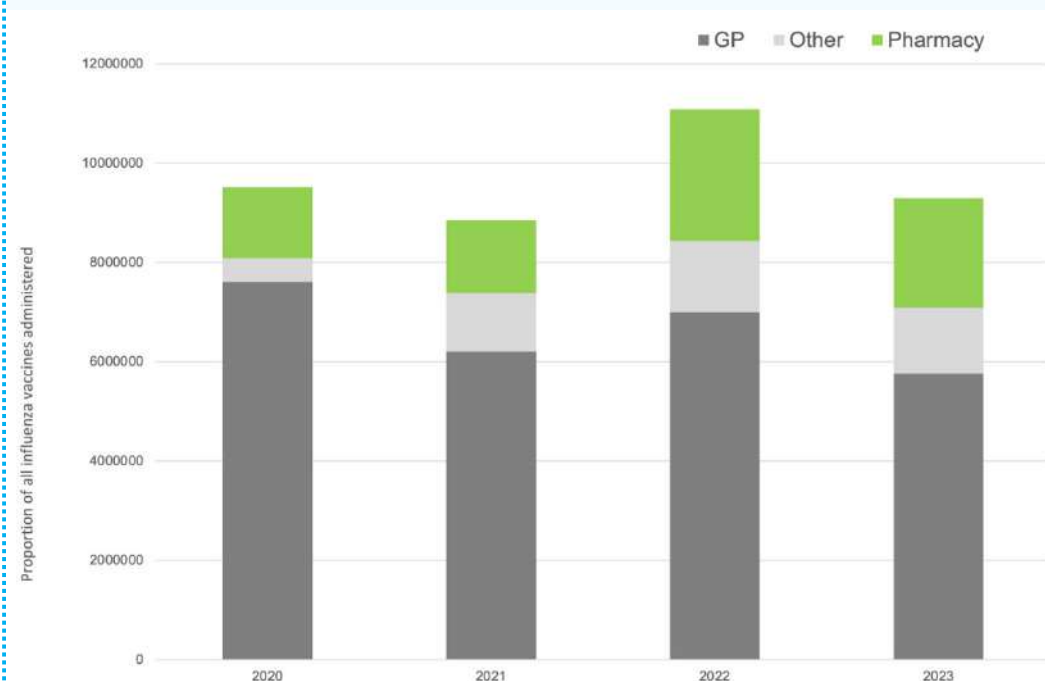
11. Published evidence of the impact of pharmacy-based vaccination, e.g., vaccination coverage rates, number of total doses administered in pharmacies, and the percentage of pharmacy-administered doses out of the total doses administered nationally

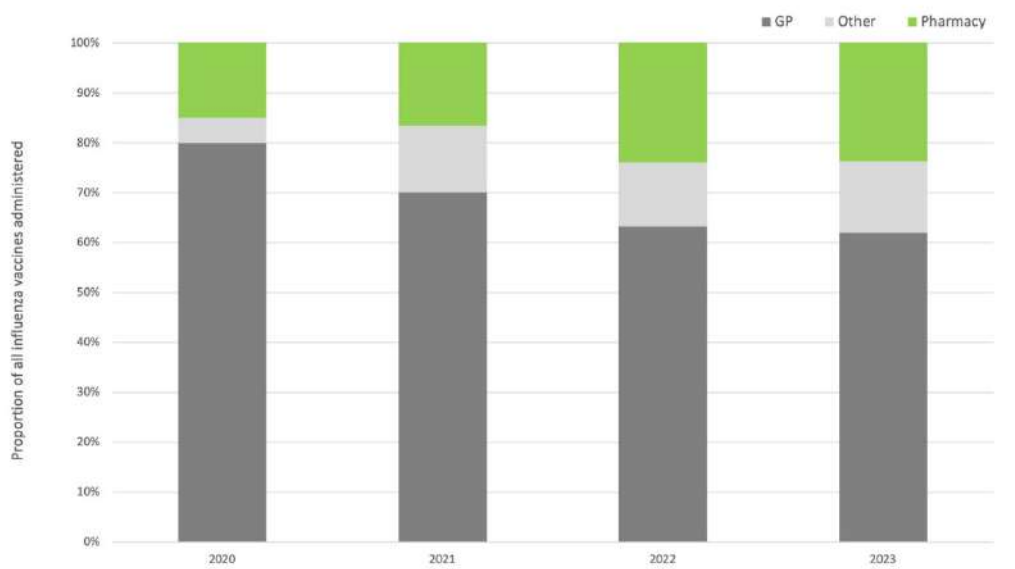
By global standards, Australian vaccination coverage is high. Targets of [95% full vaccination of children](#) have been [achieved in some jurisdictions](#), although this has declined slightly during the COVID-19 pandemic.

However, the [proportion of adult Australians who are fully vaccinated is lower](#) — although this has increased in recent years due to public health messaging and improved access to vaccination through community pharmacies.

Some research has highlighted the impact of pharmacist vaccination in Australia on coverage rates for vaccination:

- Pharmacist vaccination services can improve vaccine coverage, particularly in regional and remote areas. ([LINK](#))
- Once community pharmacy became a vaccination site for COVID-19 vaccine, community pharmacy increased overall impact to approximately 50% of ongoing COVID-19 vaccines administered to become the biggest provider of COVID-19 booster doses ([LINK](#))
- Community pharmacists are playing an increasing role as a provider of influenza vaccines. In 2023, community pharmacists administered approximately 22% of all influenza vaccines, which represents over two million doses. In Western Australia, which ran a “free flu vaccine” programme in 2023, this was approximately 38% of all influenza vaccines (see graphs below)





Diagrams: Influenza vaccines administered through community pharmacies (Source: Australian Immunisation Register, last updated 10 October 2023, data at <https://www.health.gov.au/resources/publications/influenza-flu-immunisation-data-1-march-to-3-october-2020-2023?language=en>)

2.2 Belgium

Member organisation	Association of Pharmacists Belgium (APB)
Authors	Magali Van Steenkiste, Jan Saevels, Koen Straetmans

2.2.1 Section A: Clinical coverage of pharmacy-based vaccination

1. Authorised vaccine types, population groups and vaccinators for pharmacy-based vaccination.		
Vaccine type	Eligible population	Authorised vaccinator
COVID-19	Anyone who is over 12 years old (or over 16 depending on the region).	Pharmacists who completed the required training
Influenza	Anyone who is over 12 years old.	Pharmacists who completed the required training
Other relevant details		
<p>COVID-19 The Belgian Superior Health Council defines “at-risk groups” as a part of their COVID-19 vaccination strategy, as below. The full document can be found here (in English).</p> <p>“At-risk groups: >65yo [years old]; persons living in long-term care facilities and nursing homes; pregnant women (any stage); >18yo with BMI >40; >18yo with underlying comorbidities (including severe mental health conditions and severe intellectual disabilities) or certain rare diseases; >18yo with immunosuppression; <18yo with specified conditions (e.g., pelvic inflammatory diseases, or other chronic or rare diseases); all persons active in the care sector; ‘cocoon vaccination’ (persons living in the same household of severe and very severe immunocompromised patients).”</p> <p>Influenza Belgian pharmacists are working to boost vaccination rates, focusing primarily on patients who infrequently or never consult doctors. Additionally, there exists an informal agreement with general practitioners regarding the provision of pharmacy-based vaccination services. Typically, pharmacists will refer children and the immunocompromised to doctors at the first instance. Protocols for appropriate referral processes have been established.</p> <p>The Belgian Superior Health Council has set a definition of “at-risk groups” for influenza vaccination, similar to their COVID-19 strategy. The full document can be found here (in French).</p> <p>“At-risk groups: >65yo; >6 months with chronic underlying conditions; persons living in a long-term care facility and nursing homes; pregnant women (any stage); >6 months with underlying chronic disease; >6 months–18yo under long-term aspirin; all persons active in the care sector; ‘cocoon vaccination’ (for persons living in the same household of patients who are at risk or infants <6 months whose mother was not vaccinated during pregnancy).”</p>		

2.2.2 Section B: Key policies and regulations of pharmacy-based vaccination

2. Presence of prescribing authority for vaccines and access rights to patient’s vaccination records.	
Prescribing authority	Yes
Accessing medical records	Pharmacists are yet to have complete access to medical records, but checking the vaccination status is possible in some regions via a shared pharmacy data network.

3. Practice and legislative changes in recent times.

<p>a. Practice guidelines and/or legislative requirements</p>	<p>COVID-19 Pharmacy-based vaccination became permitted under Belgian law as of March 2022.</p> <p>Influenza The most recent legislative change for influenza vaccination was introduced on 9 October 2023 (officially published on 11 October 2023 — see URL1 and URL2). The new amendment replaced the existing law applicable to the scope of pharmacists.</p> <p>Excerpt from URLs above (translated from French):</p> <p>“By way of derogation from Paragraph 1, persons who can practise the field of pharmacy in accordance with Article 6, § 1, are authorised to prescribe vaccines solely for the prophylaxis of influenza [. . .] By way of derogation from Paragraph 1, persons who practise pharmacy in accordance with Article 6, § 1 and who practise within a pharmacy open to the public are also authorised to administer the [influenza] vaccines.”</p>
<p>b. Training requirements or certification</p>	<p>COVID-19 Training requirements for pharmacists were published in 2022 via this link. This legislation outlines the requirement for pharmacists to complete COVID-19 vaccination training conducted by a doctor or nurse and mandates the provision of proof of this training upon request.</p> <p>Excerpt from the URL (translated from French):</p> <p>“The specific training referred includes training of at least 8 hours covering the theoretical aspects of vaccination, including the composition of vaccines, the recommendations of the Higher Health Council, allergies to certain components and allergic reactions to vaccines, and practical aspects of vaccination techniques, such as sterile administration, recognition of serious allergic reactions, i.e., anaphylactic shock, and basic resuscitation techniques. The training must be renewed every three years.”</p>
<p>c. Requirements for vaccination premises</p>	<p>COVID-19 A standard operating procedure for pharmacy-based COVID-19 vaccination is published here.</p> <p>Influenza A standard operating procedure for pharmacy-based Influenza vaccination is published here.</p>

4. Regional variations in regard to the regulations and requirements.

In Belgium, vaccination regulations and duties are divided between federal and regional authorities.

The federal government handles:

- The designation of immunisers;
- Development of standard operating procedures;
- Selection of target demographics;
- Vaccination training;
- Remuneration; and
- Logistics of influenza vaccines.

Regional governments, on the other hand, manage:

- Registration of the Vaccination Act;

- Logistics for COVID-19 vaccines; and
- Conduct public awareness campaigns for vaccination. The following are the links to the public information platforms managed by the regional governments — [Flanders \(northern region, Flemish\)](#), [Brussels \(central region, French\)](#) and Wallonia (southern region, French): [URL 1](#), [URL 2](#)

2.2.3 Section C: Remuneration framework

5. Financial reimbursement or billing procedures to cover pharmacy-based vaccination services including the details of third-party payers.

COVID-19

- Administration fees for the pharmacist: EUR 15.5 for each administration of a vaccine and EUR 3.22 for dispensing each vaccine.
- Logistics of vaccines — no cost to pharmacists as it is managed by regional authorities.
- No out-of-pocket costs for patients who are Belgian citizens.

Influenza

- Pharmacists need to order and pay for vaccines from wholesalers.
- Dispensing fee
 - If the patient belongs to an “at risk-group” (as described in Section A):
 - the patient pays the co-pay component only (e.g., EUR 2.45–4.08) of a vaccine, less the government subsidy.
 - pharmacist receives the dispensing fee of EUR 5.06, and a small economical margin for the vaccine dispensed.
 - If the patient does not belong to the at-risk group, there is no reimbursement. Patients pay the full price of a vaccine, and pharmacists receive a dispensing margin.
- Vaccine administration fee
 - Pharmacist: EUR 15.5 for each service of vaccine administration.
 - Patients: free of charge for Belgian citizens.

2.2.4 Section D: Implementation processes

6. Brief timeline of the implementation process in chronological order.

Date	Event
October 2021	Prescribing authority of influenza vaccine
March 2022	Prescribing, preparation, administration of COVID-19 vaccines
October 2023	Administration of influenza vaccine

7. Strategies used to build initial collaboration and ongoing support with key stakeholders throughout the implementation process.

a. Non-pharmacist health professional groups	<ul style="list-style-type: none"> • Interprofessional consultations and meetings, e.g., through an existing NGO that manages meetings between doctors and pharmacists
b. Policymakers at the national/ministerial level	<ul style="list-style-type: none"> • Continuous consultations and meetings with the Federal Minister of Health • Recommendations by the Belgian Royal Academy of Medicine. • Showcasing pharmacists’ capabilities in increasing vaccination uptake, which is one of the key health objectives. • Real-time monitoring and reporting of vaccination efforts from the community pharmacy network

c. The public	<ul style="list-style-type: none"> • Regional authorities ran public awareness campaigns, e.g., pharmacists are available and trusted healthcare professionals, community pharmacies can shorten patients' healthcare journeys, etc. • A centralised online platform where citizens can find vaccinating pharmacies. • A large number of public interests were expressed (>1,200 citizens) about their willingness to get vaccinated in pharmacies and by pharmacists.
d. Pharmacists and pharmacy technicians	<p>Pharmacy organisations offer:</p> <ul style="list-style-type: none"> • Phone support dedicated to enquiries related to pharmacy-based vaccination; • Required training; • Information websites and development of relevant procedures; and • Software to link vaccination records to vaccination databases.

8. Key activities that led to the success of pharmacy-based vaccination.

The Association of Pharmacists Belgium has appealed to the regional and federal Ministers of Health, advocating that community pharmacies to be recognised as additional “vaccination hubs”. This highlights pharmacists' capacity to enhance vaccination coverage and contribute to achieving primary health objectives.

Key strategies include:

- Strong leadership
- Excellent communication channels with stakeholders
- Development of supporting tools and procedures
- Technical advancement of pharmacy software to identify:
 - Target population and at-risk groups
 - Register vaccination records

9. Challenges that pharmacists encountered during the implementation process, either at an individual, local or organisational level.

- Resistance from some health professionals over professional or remunerative territory
- Operational constraints, e.g., space availability within a pharmacy, staffing level

10. Future strategies for further advancing pharmacy-based vaccination.

While pharmacy-based vaccination has been legally approved, it is currently established as a permanent service only for COVID-19 vaccines, not yet for influenza.

The Association of Pharmacists Belgium is committed to advocating the permanent inclusion of influenza vaccinations in pharmacy services. Additionally, the association is ready to leverage its network of pharmacies and their expertise for administering other vaccines, such as those for pneumococcal infections, human papilloma virus (HPV), and respiratory syncytial virus (RSV), to support broader public health goals when required.

2.2.5 Section E: Impact of pharmacy-based vaccination

11. Published evidence of the impact of pharmacy-based vaccination, e.g., vaccination coverage rates, number of total doses administered in pharmacies, and the percentage of pharmacy-administered doses out of the total doses administered nationally.

COVID-19

In 2022, pharmacists in Belgium administered 385,069 doses of COVID-19 vaccines. This was accomplished by 1,425 community pharmacies (out of a 4,606 total). Data on the total vaccination rate can be found via the following links: [URL 1](#) and [URL 2](#)

Note: All data were collected via the Vaccinnet+ database, where all COVID-19 vaccinations are recorded. Sciensano ([URL 1](#)) makes no distinction between the profession of vaccinators. The Flanders region reports its [data](#) separately. It does make a distinction between types of vaccinator, but not between the order of administration (i.e., initial dose vs. booster)

Influenza

No data are available yet, as pharmacists started administering influenza vaccines only a few days before the time of writing.

2.3 France

Member organisation	French Chamber of Pharmacists
Authors	Individual authors not disclosed

2.3.1 Section A: Clinical coverage of pharmacy-based vaccination

1. Authorised vaccine types, population groups and vaccinators for pharmacy-based vaccination.

Vaccine type	Eligible population	Authorised vaccinator
COVID-19	Anyone who is over 11 years old	Pharmacists who completed the required training
Influenza	Anyone who is over 11 years old.	Pharmacists who completed the required training

Other vaccines:

Scope of the role of pharmacists in vaccination since August 2023 (including community pharmacists, clinical biology pharmacists and hospital pharmacists)

Target population	11 years old and over	
	Prescribing*	Administration*
Disease or infectious agent		
Whooping cough	Yes	Yes
Diphtheria-tetanus-poliomyelitis (DTP)	Yes	Yes
Yellow fever (only in authorised centres)	Yes (b)	Yes (c)
Seasonal influenza	Yes	Yes
Hepatitis A	Yes	Yes
Hepatitis B	Yes	Yes
Invasive meningococcal infections	Yes	Yes
Human papilloma virus (HPV)	Yes	Yes
Invasive pneumococcal infections	Yes	Yes
Rabies (pre-exposure)	Yes	Yes
Measles-mumps-rubella (MMR)	Yes (b)	Yes (c)
BCG (tuberculosis)	Yes (b)	Yes (c)
Chickenpox	Yes (b)	Yes (c)
Zoster	Yes (b)	Yes (c)
COVID-19	Evolving recommendations	
Monkeypox	Only in specific vaccination centres	

Source : vaccination-info-service.fr (Santé Publique France)
 *Subject to specific vaccination training
 (b) Except immunocompromised individuals;
 (c) in liaison with the prescribing doctor for immunocompromised patients

2.3.2 Section B: Key policies and regulations of pharmacy-based vaccination

2. Presence of prescribing authority for vaccines and access rights to patient's vaccination records.

Prescribing authority Yes

Accessing medical records Yes.

3. Practice and legislative changes in recent times.

a. Practice guidelines and/or legislative requirements [Decree no. 2023-736 of 8 August 2023](#) relating to the vaccination skills of nurses, community pharmacists, as well as nurses and pharmacists working in in-house pharmacies, healthcare professionals working in clinical biology laboratories and students in the third cycle of pharmaceutical studies.

b. Training requirements or certification [Executive order of 8 August 2023](#) relating to the technical specifications and educational objectives for the training in the administration and prescription of vaccines

c. Requirements for vaccination premises [Executive order of 8 August 2023](#) relating to the technical specifications for the administration of vaccines

4. Regional variations in regard to the regulations and requirements.

None.

2.3.3 Section C: Remuneration framework

5. Financial reimbursement or billing procedures to cover pharmacy-based vaccination services including the details of third-party payers.

The fees for vaccinations covered by the health insurance scheme are set out in the [national agreement governing relations between pharmacists and the health insurance scheme](#) (in French).

- Vaccine not requiring a prescription: EUR 7.50, including VAT
- Vaccine requiring a compulsory prescription and for a patient with a medical prescription: EUR 7.50, including VAT
- Vaccine requiring a compulsory prescription and for a patient without a medical prescription: EUR 9.60, including VAT

More information is presented in the [French social security webpage](#) (in French).

2.3.4 Section D: Implementation processes

6. Brief timeline of the implementation process in chronological order.

Date	Event
2016	Authorisation by law of a pilot for flu vaccination by community pharmacists
2017–2019	Pilot programme for influenza vaccination in two regions (2017/2018) then in four regions (2018/2019)
March 2019	Vaccination becomes part of the permanent missions of pharmacists
April 2019	Influenza vaccination expanded to the national level in authorised community pharmacies
March 2021	COVID-19 vaccination by pharmacists, pharmacy students and pharmacy technicians (under the supervision of a pharmacist) available at national level
April 2022	Regulatory texts extended the list of vaccines (all non-live vaccines) and the target population (adults and minors aged 16+ targeted by vaccination recommendations)
November 2022	20,486 out of the 20,931 community pharmacies involved in the flu vaccination campaign. Number of flu vaccinations in community pharmacies: 5,355,154 vaccines (47.8% of all flu vaccinations in 2022–23 compared with 40% in 2021–22 and 32% in 2020–21).
January 2023	Law authorising pharmacists not only to administer but also to prescribe vaccines
August 2023	Regulatory texts making the January law applicable : <ul style="list-style-type: none"> • Vaccination skills of pharmacists (including hospital pharmacists and clinical biology pharmacists); • The technical specifications and educational objectives for the training in the administration and prescription of vaccines; and • The list of vaccines and target populations.

2.3.5 Section E: Impact of pharmacy-based vaccination

7. **Published evidence of the impact of pharmacy-based vaccination, e.g., vaccination coverage rates, number of total doses administered in pharmacies, and the percentage of pharmacy-administered doses out of the total doses administered nationally.**

More than 52% of all COVID-19 vaccine doses and 78% of all flu vaccines were administered by pharmacies according to [L'Assurance Maladie \(2022\)](#) .

2.4 Germany

Member organisation	ABDA — Federal Union of German Associations of Pharmacists
Author	Peggy Ahl

2.4.1 Section A: Clinical coverage of pharmacy-based vaccination

1. Authorised vaccine types, population groups and vaccinators for pharmacy-based vaccination.		
Vaccine type	Eligible population	Eligible personnel for vaccine administration
Influenza	People ≥ 18 years	Pharmacists who have completed the required training
COVID-19	People ≥ 12 years	Pharmacists who have completed the required training
Details		
The details are set out in the guidelines of the Standing Vaccination Commission (STIKO) which are being updated continuously (at least once a year) — (LINK)		

2.4.2 Section B: Key policies and regulations of pharmacy-based vaccination

2. Presence of prescribing authority for vaccines and access rights to patient's vaccination records.	
Prescribing authority	No
Accessing medical records	Yes
Details: Trained pharmacists are authorised to administer the vaccines without the need for a medical prescription. (LINK) Pharmacists may access the patient's vaccination records with the patient's consent (International Certificate of Vaccination or Prophylaxis ("yellow vaccination card") or electronic vaccination record as well as the Electronic Health Record). (LINK)	
3. Practice and legislative changes in recent times.	
a. Changes to practice guidelines and/or legislative requirements	Vaccinations according to STIKO guidelines for the current vaccination season
b. Changes to training requirements and certification	The training curricula for both vaccines have been unified in on curriculum (LINK)
c. Changes to requirements for vaccination premises	The best practice guidelines of the Federal Chamber of Pharmacists have also been unified in one guideline as well as having been updated (LINK). A commentary is also available (LINK).
4. Regional variations in regard to the regulations and requirements.	

There are no longer regional differences in the legal requirements, but there are differences regarding reimbursement by the health insurance companies. All statutory health insurance companies cover flu vaccinations in line with the recommendations of the Standing Committee on Vaccination, i.e., people with an increased risk of a severe COVID-19 infection, mainly people at the age of 60 years or older with chronic diseases, in nursing homes or with immunodeficiency, as well as their relatives, pregnant women and health care workers. Several health insurance companies also cover the costs of flu vaccinations for all insured persons aged 18 years and over. ([LINK](#))

2.4.3 Section C: Remuneration framework

5. Financial reimbursement or billing procedures to cover pharmacy-based vaccination services including the details of third-party payers.

Insured persons are entitled to reimbursement of the vaccination benefit in accordance with [Section 20i \(1\) SGB V](#). Pharmacies bill the service to the patient's insurance company. In the case of the flu vaccination, an additional claim may arise from supplementary agreements with individual health insurance companies. The German Pharmacists' Association has reached an agreement with the National Association of Statutory Health Insurance Funds on the remuneration of vaccination services. This was concluded in agreement with the private health insurance companies.

The flu vaccine is also billed directly to the patient's health insurance company. COVID-19 vaccines are procured by the German state itself. Pharmacies receive remuneration for dispensing the vaccine and for administering it in accordance with [Section 421 \(1\) SGB V](#).

2.4.4 Section D: Implementation processes

6. Brief timeline of the implementation process in chronological order.

Date	Event
October 2020	Start of the pharmacist-led flu vaccination pilot in four regions of Germany, which was expanded over time to a total of nine regions.
February 2022	Pharmacists were included in the vaccination strategy against COVID-19 in the whole national territory.
November 2022	By the start of the season 2022/2023, flu vaccination by pharmacists was implemented as a service that could be offered in community pharmacies nationwide.

7. Strategies used to build initial collaboration and ongoing support with key stakeholders throughout the implementation process.

a. Non-pharmacist health professional groups	<ul style="list-style-type: none"> • Discussions with medical associations to overcome too strong opposition
b. Policymakers at national/ministerial level	<ul style="list-style-type: none"> • Talks with the Federal Ministry of Health • Symposium on vaccination in pharmacies
c. The public	<ul style="list-style-type: none"> • Leaflets for pharmacies to inform patients • Advertising material for pharmacies
d. Pharmacists and pharmacy technicians	<ul style="list-style-type: none"> • Offer further training and qualification courses • Creation of guidelines for the implementation of vaccinations in pharmacies • Provision of materials, such as information leaflets, for carrying out vaccinations in pharmacies

8. Key activities that led to the success of pharmacy-based vaccination.

Nil known

9. Challenges that pharmacists encountered during the implementation process, either at an individual, local or organisational level.

- Opposition from medical associations.
- Fear of pharmacy owners and pharmacy staff that offering vaccination services would have negative impact on the relationship with doctors in their neighbourhood, to the extent that this could even mean a financial loss.
- Staff shortage in pharmacies.
- In some Federal States the pharmacy supervisory authority demanded an extra room in the pharmacy solely for the purpose of administering vaccines.

10. Future strategies for further advancing pharmacy-based vaccination.

- Routinely implementing vaccination services for COVID-19 and influenza in more pharmacies nationwide.
- Proving that pharmacist-led vaccination is equally as safe as those administered in doctors' surgeries.
- Being open to include further vaccinations in the portfolio if desired.

2.4.5 Section E: Impact of pharmacy-based vaccination

11. Published evidence of the impact of pharmacy-based vaccination, e.g., vaccination coverage rates, number of total doses administered in pharmacies, and the percentage of pharmacy-administered doses out of the total doses administered nationally.

No figures are available at the moment, as the 2023/24 season is in principle the first "real" season in which pharmacies can offer both vaccinations with a certain amount of preparation time.

2.5 Greece

Member organisation	Federation of the Cooperative Pharmacists of Greece (OSFE)/Pharmacy Programme University of Nicosia
Authors	Dr Alike Peletidi, Mr Vasilios Birlirakis, Mr Michael Petrides

2.5.1 Section A: Clinical coverage of pharmacy-based vaccination

1. Authorised vaccine types, population groups and vaccinators for pharmacy-based vaccination.

Vaccine type	Eligible population	Eligible personnel for vaccine administration
Seasonal (flu) vaccines	Adults (>18yrs), pregnant women, immunocompromised	Pharmacists after certification
Anti-tetanus serum	Adults (>18yrs)	Pharmacists after certification

Other relevant details

The law [4600-2019 FEK A'43 09-03-2019 (article 160 on p78)] was amended in 2019. This law amendment allowed licensed community pharmacists in Greece to carry out seasonal vaccination and administer anti-tetanus serum to citizens, as part of their operation as primary health care units. In order to be eligible to perform vaccinations pharmacists should receive relevant training and certification. This was a decision of the Minister of Health following the opinion of the Panhellenic Pharmaceutical Association.

Six flu vaccines have already been released this year (2023–24), namely:

- Vaxigrip Tetra (Vianex) QIVe 15 µg of each antigen;
- Fluarix Tetra (GSK) QIVe 15 µg of each antigen;
- Flucelvax Tetra (Seqirus) QIVc 15 µg of each antigen;
- Influvac — sub Unit Tetra QIVe 15 µg of each antigen;
- Efluelda (Vianex) QIV-HD 60 µg of each antigen; and
- Fluad Tetra (Seqirus) aQIV 15 µg of each antigen + MF59 adjuvant.

2.5.2 Section B: Key policies and regulations of pharmacy-based vaccination

2. Presence of prescribing authority for vaccines and access rights to patient's vaccination records.

Prescribing authority	Yes. This applies to seasonal (flu) vaccines only
Accessing medical records	No

Details: Community pharmacists in Greece can dispense the above vaccines or administer them without the need for a medical prescription (this applies only to the QIVe category vaccines). The Greek government announced that from 1 November 2023 community pharmacies can carry out flu vaccinations without a medical prescription (with some exceptions to the new expensive flu vaccines), with the simultaneous obligation of pharmacists to inform the National Influenza Vaccination Registry of all flu vaccinations, which they carry out in their community pharmacy.

3. Practice and legislative changes in recent times.

a. Changes to practice guidelines and/or legislative requirements	<ul style="list-style-type: none"> Managing vaccination records (as described in Section 2 above) Prescribing authority (non-medical prescription) specifically for vaccines that can be administered by pharmacists without a medical prescription (LINK).
b. Changes to training requirements and certification	<ul style="list-style-type: none"> A Greek-registered pharmacist should attend online training regarding vaccination and should be certified before carrying out vaccinations. The training and the certification are given by the Panhellenic Pharmaceutical Association. Additionally, vaccination education has been introduced at the undergraduate level in the pharmacy programme of the University of Nicosia (year 4 of study), which trains a large amount of future Greek pharmacists who decide to study in Cyprus but will practise as pharmacists in Greece.
c. Changes to requirements for vaccination premises	None
4. Regional variations in regard to the regulations and requirements.	
None	

2.5.3 Section C: Remuneration framework

5. Financial reimbursement or billing procedures to cover pharmacy-based vaccination services including the details of third-party payers.
<ul style="list-style-type: none"> Submission of claims/invoices to the government (EOPYY — National Organisation for the Provision of Health Services) for the remuneration of the provided vaccines but not for the vaccination as a service.

2.5.4 Section D: Implementation processes

6. Brief timeline of the implementation process in chronological order.	
Date	Event
March 2019	Legislation amendment (Law 4600-2019, FEK A' 43 09-03-2019)
7. Strategies used to build initial collaboration and ongoing support with key stakeholders throughout the implementation process.	
a. Non-pharmacist health professional groups	None.
b. Policymakers at national/ministerial level	<ul style="list-style-type: none"> Identifying the government's key health objectives Providing cost-utility data to support the sustainability of healthcare system
c. The public	<ul style="list-style-type: none"> Every year the Ministry of Health in collaboration with the Panhellenic Pharmaceutical Association organises public awareness campaigns in the form of posters, flyers and social media advertisements. Furthermore, the president and other members of the board of OSFE present the importance of seasonal vaccine as well as

	<p>pharmacists' contribution in media including television, radio, etc.</p> <ul style="list-style-type: none"> • Additionally, this year specifically, apart from the Panhellenic Pharmaceutical Association, the University of Nicosia conducted during World Pharmacist Day 2023 in Greece (White Tower, Thessaloniki) a live campaign on the importance of seasonal vaccination. • The campaign included verbal communication with the members of the public who passed by the kiosk, flyers (shown at the end of this case study), and a questionnaire asking them to report when was the last time they carried out their flu vaccine as well as their opinions about vaccinations in general.
d. Pharmacists and pharmacy technicians	<ul style="list-style-type: none"> • Frameworks to better integrate pharmacists into primary healthcare
<p>8. Key activities that led to the success of pharmacy-based vaccination.</p>	
<ul style="list-style-type: none"> • In advance of the launch of the seasonal vaccination campaign the Panhellenic Pharmaceutical Association (PFS) has organised a comprehensive training programme for pharmacists to support them in their critical role to promote vaccination to the general public through the provision of valid and reliable information. • Over 8,000 pharmacists have updated their knowledge through the Institute for Lifelong Learning and Professional Development of Pharmacists, where the in-depth training programme was launched. • In addition, an awareness and information campaign was launched in Greek pharmacies for the general public on seasonal vaccination. 	
<p>9. Challenges that pharmacists encountered during the implementation process, either at an individual, local or organisational level.</p>	
<ul style="list-style-type: none"> • Resistance from other health professionals over professional territory. (For many decades pharmacists were conducting vaccinations in their community pharmacies unofficially, due to the lack of a legal framework regarding vaccinations. There was a dispute with the medical community regarding the pharmacists' eligibility to perform vaccinations or not. The dispute with the medical community reached recently the Council of State, the highest court of the country, to rule that vaccination is not a medical action and thus it can be provided by pharmacists as well.) • Lack of reimbursement for vaccination-service provision. • Lack of vaccination-service provision spaces, such separate areas including care/consultation rooms. 	
<p>10. Future strategies for further advancing pharmacy-based vaccination.</p>	
<ul style="list-style-type: none"> • Nothing has been officially announced. However, when COVID-19 definitively becomes an endemic disease and annual vaccination for it becomes mandatory, it is reasonable that pharmacists will stand and fight again for their rights to offer COVID-19 vaccination through their pharmacies similar to flu vaccination. 	

2.5.5 Section E: Impact of pharmacy-based vaccination

11. **Published evidence of the impact of pharmacy-based vaccination, e.g., vaccination coverage rates, number of total doses administered in pharmacies, and the percentage of pharmacy-administered doses out of the total doses administered nationally.**

According to the data reported by the president of Panhellenic Pharmaceutical Association on 15 November 2023, a total of 1,500,000 flu vaccinations have been carried out so far, of which 1,350,000 have been carried out in community pharmacies. In general, 423,000 vaccinations were carried out without a medical prescription and 307,000 with a prescription in pharmacies from November 2 to 13. For the month of October, vaccinations at the pharmacy reached 620,000.

The above data also prove the increase in the effects of the flu vaccination since the beginning of November, when the new procedure for the direct flu vaccination of adults at the pharmacy, without a medical prescription, came into effect. ([LINK](#))

An example of a promotional flyer is presented below:

**«ΑΠΛΑ»
ΜΙΑ ΓΡΙΠΟΥΛΑ;**

Βοηθησέ μας να διαφρακίσουμε την υγεία σου!

Ο ιός της γρίπης μεταλλάσσεται συνεχώς, συνεπώς είναι απαραίτητο να επαναλαμβάνεται ο εμβολιασμός **κάθε χρόνο**, δίνοντας ιδιαίτερη έμφαση στις **ομάδες αυξημένου κινδύνου**.

Ο εμβολιασμός κατά της εποχικής γρίπης είναι το καλύτερο και ασφαλέστερο διαθέσιμο μέσο πρόληψης.

ΑΠΛΑ ΚΑΝΕ ΤΟ ΑΝΤΙΓΡΙΠΙΚΟ ΕΜΒΟΛΙΟ
Συμβουλευσου τον φαρμακοποιό σου!

Άνω των 60 ετών
Χρόνιοι ασθενείς
Εγκυμονούσες
Υγειονομικά προσυμπτώ

ΚΙΝΗΣΗ ΠΡΟΤΕΣΤΑ ΤΩΝ ΠΡΟΪΓΜΑΤΩΤΩΝ ΦΑΡΜΑΚΕΥΤΙΚΩΝ
UNIVERSITY of NICOSIA

2.6 India

Member organisation	Indian Pharmaceutical Association
Authors	Manjiri Gharat, Raj Vaidya

[Note: India is the only country included in this publication both with a case study and participation in the insight board. India's government has authorised PBV and has produced guidelines for this service, which is a significant development, especially considering the potential impact of these measures in such a large country. For this reason, the Indian Pharmaceutical Association was invited to submit a case study on this success story. However, implementation has not yet taken place due to lack of training and other barriers, which is why IPA was also invited to the insight board about implementation challenges.]

2.6.1 Section A: Clinical coverage of pharmacy-based vaccination

1. Authorised vaccine types, population groups and vaccinators for pharmacy-based vaccination.		
Vaccine type	Eligible population	Eligible personnel for vaccine administration
None	None	None
Other relevant details		
The Ministry of Health through a few documents over the past few years has suggested inclusion of pharmacists and pharmacy students in immunisation activities, especially for a few national immunisation programmes. Pharmacists were also included in the list of "potential" vaccinators. All of this was subject to training. However, no systematic actions have been taken so far to train public sector pharmacists or private community pharmacists to include as vaccinators. Under an FIP-IPA project, we are now conducting the first training in December 2023 to train pharmacists to vaccinate.		

2.6.2 Section B: Key policies and regulations of pharmacy-based vaccination

2. Presence of prescribing authority for vaccines and access rights to patient's vaccination records.	
Prescribing authority	No
Accessing medical records	No
Details: No such authority yet	
3. Practice and legislative changes in recent times.	
a. Changes to practice guidelines and/or legislative requirements	<p>The Indian government has gradually allowed pharmacists to administer certain vaccines, primarily for adults.</p> <p>Policies vary by state, and some states have been more progressive in implementing pharmacy-based vaccination services.</p> <p>The Ministry of Health and Family Welfare provides guidelines for vaccine administration.</p>
b. Changes to training requirements and certification	No accreditation pathway, no continuing education requirements. But recently, the Pharmacy Council of India, in its revised curriculum for the diploma in pharmacy programme has included vaccination training at second year DPharm level.

c. Changes to requirements for vaccination premises	Nil known
4. Regional variations in regard to the regulations and requirements.	
No regional variations	

2.6.3 Section C: Remuneration framework

5. Financial reimbursement or billing procedures to cover pharmacy-based vaccination services including the details of third-party payers.
None

2.6.4 Section D: Implementation processes

6. Brief timeline of the implementation process in chronological order.	
Date	Event
Nov–Dec 2023	Training of initial batch of pharmacists to vaccinate
7. Strategies used to build initial collaboration and ongoing support with key stakeholders throughout the implementation process.	
a. Non-pharmacist health professional groups	None yet
b. Policymakers at national/ministerial level	<ul style="list-style-type: none"> The IPA has written letters to the Ministry of Health to include pharmacists as vaccinators. The IPA has also written a letter to the Pharmacy Council of India to get approved the role of pharmacist as vaccinator in its executive committee and to come up with a Council policy document. A response is awaited in both cases.
c. The public	None yet
d. Pharmacists and pharmacy technicians	None yet
8. Key activities that led to the success of pharmacy-based vaccination.	
<ul style="list-style-type: none"> Under process — FIP-IPA pharmacists as vaccinators project Training modules (based on University of Sydney’s modules) have been developed which are India-centric and will be placed on the FIP website 	
9. Challenges that pharmacists encountered during the implementation process, either at an individual, local or organisational level.	
<ul style="list-style-type: none"> We will understand the challenges once implementation is done. 	

10. Future strategies for further advancing pharmacy-based vaccination.

- After the initial training of the first batch of pharmacists to vaccinate, we intend to conduct a pilot to assess the competencies of pharmacists to vaccinate and also assess/gauge the acceptance of other healthcare providers.
- Advocate towards bringing about a change in regulation, to allow pharmacists to vaccinate.
- Provide training to additional pharmacists to vaccinate.

2.6.5 Section E: Impact of pharmacy-based vaccination

11. Published evidence of the impact of pharmacy-based vaccination, e.g., vaccination coverage rates, number of total doses administered in pharmacies, and the percentage of pharmacy-administered doses out of the total doses administered nationally.

Nil known

2.7 Italy

Member organisation	Italian Pharmacy Owners Federation (Federfarma)
Author	Mauro Lanzilotto

2.7.1 Section A: Clinical coverage of pharmacy-based vaccination

1. Authorised vaccine types, population groups and vaccinators for pharmacy-based vaccination.		
Vaccine type	Eligible population	Eligible personnel for vaccine administration
Influenza	18 years and over, including those who are entitled to free vaccine that is the fragile subjects and those in the age group of 60 years and over, not for first vaccination	Trained pharmacist
COVID-19	18 years and over, adolescents, not for first vaccination	Trained pharmacist
Herpes zoster (Marche region)	65 years and over, fragile subjects	Trained pharmacist

2.7.2 Section B: Key policies and regulations of pharmacy-based vaccination

2. Presence of prescribing authority for vaccines and access rights to patient's vaccination records.	
Prescribing authority	Yes
Accessing medical records	No
3. Practice and legislative changes in recent times.	
a. Changes to practice guidelines and/or legislative requirements	Nil known
b. Changes to training requirements and certification	Nil known
c. Changes to requirements for vaccination premises	<p>MoU of 28 July 2022 between the government, the regions and autonomous provinces, Federfarma, Assofarm and Farmacieunite for the administration by pharmacists of COVID-19 vaccines, flu vaccines and for the administration of diagnostic tests involving the taking of a biological sample from the nose, saliva or oropharynx: possibility of carrying out the aforementioned services both within the pharmacy and in areas, premises or facilities separate from the premises where the pharmacy is located, as long as they are located within the relevant pharmacy location as set out in the so called <i>Pianta Organica</i> (the local community geographically limited that each pharmacy must serve).</p> <p>New: possibility for two or more pharmacies, owned by different entities, to perform the services in question, also using common areas, premises or external structures, by entering into a network contract. These areas must fall within the area of the</p>

pharmaceutical site pertaining to one of the pharmacies adhering to the network contract provided for in the organisation plan.

4. Regional variations in regard to the regulations and requirements.

On the basis of specific agreements with the regions and autonomous provinces, provision may be made for the recognition in favour of the pharmacies of any further payments (in addition to the remuneration of EUR 6.16 payable to the pharmacies for the professional act per single inoculation) relating to the reimbursement of individual protection devices and consumable material and any incentives for reaching the vaccination targets set by the same territorial administrations.

2.7.3 Section C: Remuneration framework

5. Financial reimbursement or billing procedures to cover pharmacy-based vaccination services including the details of third-party payers.

Both flu and COVID-19 vaccination are reimbursed by the public health system. The fee payable to pharmacies for the professional act for each inoculation is set at EUR 6.16.

If a person decides to seek vaccination against flu, without a medical recommendation, both the fee for the inoculation and the retail price of the vaccine is borne by the customer.

2.7.4 Section D: Implementation processes

6. A brief timeline of the implementation process in chronological order.

Date	Event
March 2022	Decree-law no. 24 of 24 March 2022: Urgent provisions to overcome measures to combat the spread of the COVID-19 epidemic, as a consequence of the end of the state of emergency.
May 2022	Law no. 52 of 19 May 2022 converting Decree-Law 24 March 2022
July 2022	MoU between the government, the regions and autonomous provinces and Federfarma, Assofarm and Farmacieunite for the administration by pharmacists of COVID-19 and influenza vaccines, as well as diagnostic tests with biological sample collection from the nasal, salivary or oropharyngeal sites.

7. Strategies used to build initial collaboration and ongoing support with key stakeholders throughout the implementation process.

a. Non-pharmacist health professional groups	Nil known
b. Policymakers at national/ministerial level	COVID-19 vaccination campaigns no longer focus on vaccination hubs but only on pharmacies and general practitioners.
c. The public	Public awareness campaigns: The Ministry of Health's communication campaign to promote vaccination against both COVID-19 and seasonal influenza and the public utility number 1500, a phone line for COVID-19 information, was also set up to provide in-depth and customised information to users. Federfarma has also prepared an information poster for users to be displayed in pharmacies.

d. Pharmacists and pharmacy technicians

We are waiting for frameworks to be put in place so that pharmacies can be concretely mobilised in view of Ministerial Decree 77/2022 on territorial health care, which for the first time recognises pharmacies as a fundamental and integral element of the national health service and fully includes pharmacies among the actors of integrated primary care.

8. Key activities that led to the success of pharmacy-based vaccination.

Federfarma participated in the memorandum of understanding that formed the framework for the practical performance of vaccinations in pharmacies.

9. Challenges that pharmacists encountered during the implementation process, either at an individual, local or organisational level.

Initial resistance of general practitioners.

10. Future strategies for further advancing pharmacy-based vaccination.

We are working to extend pharmacy-based vaccination to other diseases as, so far, only COVID-19 and flu are administered in the pharmacy. In our opinion at the moment pharmacy has to be considered as an untapped resource.

2.7.5 Section E: Impact of pharmacy-based vaccination

11. Published evidence of the impact of pharmacy-based vaccination, e.g., vaccination coverage rates, number of total doses administered in pharmacies, and the percentage of pharmacy-administered doses out of the total doses administered nationally.

Unfortunately, we do not have any availability of the real weight of community pharmacies in the vaccination campaign. We asked the public authority several times for these data, but we never received any reply. From the end of 2023, access to vaccines for the entire adult population will be extended in Lazio for all pharmacies ([LINK](#)). Data from 3 November 2023 on flu and COVID-19 vaccine administration is presented in the information below:

TRANSPPOSITION MEMORANDUM OF UNDERSTANDING 28 JULY 2022
 Regional Agreements Flu Vaccines and COVID-19 2023–2024
 Pharmacy administration of vaccines in the Regional Health Service (RHS)
 (Fees paid by the regions to pharmacies for the service)

Region	Flu vaccine administration in the RHS scheme	COVID-19 vaccine administration
Abruzzo	EUR 1.00 per individual inoculum for charges for logistics, reservation, PPE, waste disposal	EUR 3.74 per individual inoculum for charges for logistics, reservation, PPE, waste disposal
Basilicata	EUR 0.40 incl. VAT, for distribution costs, to be paid to the commissioned party, up to a ceiling of 5,000 doses distributed; from the next dose, the remuneration for the distribution cost is set at EUR 0.30 (incl. VAT).	No
Calabria	EUR 0.84 for reimbursement of administrative formalities and materials needed to carry out administration	—
Campania	Charges for logistics, delivery and computerisation quantified in: EUR 2.84 for urban pharmacies EUR 3.34 for rural pharmacies	EUR 3.00 bottle depot (valid for six inoculated doses)

Emilia Romagna	EUR 0.54 for reimbursement of administrative formalities and materials needed to carry out administration	EUR 4.24 for reimbursement of administrative formalities and materials needed to carry out administration
Friuli Venezia Giulia	EUR 3.84 for reimbursement of administrative tasks and materials needed to perform administration	EUR 3.84 for reimbursement of administrative tasks and materials needed to perform administration
Liguria	EUR 3.00 VAT excluded per booking	
Lombardia		EUR 6.00 for charges related to organisational functions, PPE waste disposal
Marche	EUR 0.84 per individual inoculum for charges related to organisational functions, PPE, waste disposal.	EUR 0.84 per individual inoculum for charges related to organisational functions, PPE, waste disposal.
Molise		No, because the region has not made vaccines available to pharmacies
Prov. aut. Bolzano	EUR 7.84 for logistics costs etc.	EUR 7.84 for logistics costs etc.
Puglia	No	
Sardegna	No, because the regional agreement provides for the professional fee to be paid by the citizen	No, because the regional agreement provides for the professional fee to be paid by the citizen
Sicilia		
Toscana	EUR 1.34 charges for logistics, waste disposal	EUR 3.00 per individual inoculum for charges for logistics, waste disposal, etc.
Umbria	EUR 1.84 for vaccination-related services	EUR 1.84 for vaccination-related services
V. D'Aosta	EUR 1.00 for each vaccination performed, for reimbursement of PPE costs	EUR 1.00 for each vaccination performed, for reimbursement of PPE costs
Veneto	EUR 0.50 charges for logistics	

2.8 Jordan

Member organisation	Jordan Pharmacists Association (JPA)
Author	Samira Shammas

2.8.1 Section A: Clinical coverage of pharmacy-based vaccination

1. Authorised vaccine types, population groups and vaccinators for pharmacy-based vaccination.		
Vaccine type	Eligible population	Eligible personnel for vaccine administration
Flu vaccine, COVID-19	Adult population	Community pharmacist
Details		
All Jordanians as well as expatriates can make use of the availability of vaccination offered free of charge for all. This include all other vaccines, except those for children, that could be stocked and sold in the pharmacy such as HPV, shingles, pneumococcal vaccines and others.		

2.8.2 Section B: Key policies and regulations of pharmacy-based vaccination

2. Presence of prescribing authority for vaccines and access rights to patient's vaccination records.	
Prescribing authority	Yes
Accessing medical records	No
Details: Regarding the flu and COVID-19 vaccines, the community pharmacist can prescribe, dispense, and administer without the need for a prescription and without the need for the patient file which in practice not available in the pharmacy.	
3. Practice and legislative changes in recent times.	
a. Changes to practice guidelines and/or legislative requirements	<ul style="list-style-type: none"> Since the approval of our Jordan Food and Drug Administration for the vaccination guidelines in 2019, some documents were created such as guidelines for the practising pharmacist to deliver vaccination services as well as guidelines required to register the community pharmacy to deliver this service.
b. Changes to training requirements and certification	<ul style="list-style-type: none"> The schools of pharmacy have integrated vaccination training for students in their curricula. JPA holds online educational vaccination training. A certified pharmacist must be trained for first aid.
c. Changes to requirements for vaccination premises	<ul style="list-style-type: none"> JPA to work on assigning an accreditation entity for the immunisation programme and attract more corporate sponsors for the training. There is a need to ensure the establishment of records for documentation in the pharmacy for vaccination activity in patients' files as well the general immunisation record.
4. Regional variations in regard to the regulations and requirements.	
None.	

2.8.3 Section C: Remuneration framework

5. Financial reimbursement or billing procedures to cover pharmacy-based vaccination services including the details of third-party payers.

- The patient pays from their pocket.
- The financial reimbursement for the vaccination activity is USD 5, as assigned by the JFDA.

2.8.4 Section D: Implementation processes

6. Brief timeline of the implementation process in chronological order.

Date	Event
None	None

7. Strategies used to build initial collaboration and ongoing support with key stakeholders throughout the implementation process.

a. Non-pharmacist health professional groups	None
b. Policymakers at national/ministerial level	Held several meetings with the JFDA officials, to finally have a meeting with the minister of health and his legal counterpart resulting in approval for pharmacists to deliver the service.
c. The public	Due to COVID-19, no public activities were held.
d. Pharmacists and pharmacy technicians	Technicians are not included in delivering vaccination in the pharmacy

8. Key activities that led to the success of pharmacy-based vaccination.

- The Advocacy Summit on immunisation that was held by FIP during February 2018 in Amsterdam was the igniting point to request the JPA to start on the service.
- An advocacy technical committee formed represented diverse backgrounds ranging from academia, manufacturing companies, community pharmacists and patient protection coalitions.
- A survey was run by a third party to check on pharmacists' willingness to deliver the service as well as society's willingness to be vaccinated by a trained pharmacist.

9. Challenges that pharmacists encountered during the implementation process, either at an individual, local or organisational level.

Some medical doctors did challenge.

10. Future strategies for further advancing pharmacy-based vaccination.

None at the moment.

2.8.5 Section E: Impact of pharmacy-based vaccination

11. Published evidence of the impact of pharmacy-based vaccination, e.g., vaccination coverage rates, number of total doses administered in pharmacies, and the percentage of pharmacy-administered doses out of the total doses administered nationally.

Nil known.

2.9 Lithuania

Member organisation	The Lithuanian Pharmaceutical Association
Authors	Prof. Dr Ona Ragažinskiene

2.9.1 Section A: Clinical coverage of pharmacy-based vaccination

1. Authorised vaccine types, population groups and vaccinators for pharmacy-based vaccination.		
Vaccine type	Eligible population	Authorised vaccinator
Influenza	Anyone >18 years old	General practice pharmacists
Tick-borne encephalitis	Anyone >18 years old	General practice pharmacists
Pneumonia	Anyone >18 years old	General practice pharmacists
COVID-19	Anyone >18 years old	General practice pharmacists
Other relevant details		
Description of requirements for the provision of services by an extended practice pharmacist		

2.9.2 Section B: Key policies and regulations of pharmacy-based vaccination

2. Presence of prescribing authority for vaccines and access rights to patient's vaccination records.	
Prescribing authority	Yes
Accessing medical records	N/A
3. Practice and legislative changes in recent times.	
a. Practice guidelines and/or legislative requirements	Inclusion of legislation for pharmacy-based vaccination. <ul style="list-style-type: none"> COVID-19 vaccine Pneumococcal vaccine
b. Training requirements or certification	No changes.
c. Requirements for vaccination premises	The requirements for the first aid kit have been updated; it is now a mandatory provision in pharmacies that administer vaccinations. Amendments were made in the legislation to allow pharmacy-based pharmacy vaccination services during a state-level emergency.
4. Regional variations in regard to the regulations and requirements.	
None.	

2.9.3 Section C: Remuneration framework

5. Financial reimbursement or billing procedures to cover pharmacy-based vaccination services including the details of third-party payers.

Pharmacies are responsible for coordinating directly with municipalities regarding the supply of COVID-19 vaccines and other necessary supplies. Municipalities will allocate vaccines and related resources based on the quantities in stock and the requirements specified by the vaccination providers (see the following [URL](#)).

2.9.4 Section D: Implementation processes

6. A brief timeline of the implementation process in chronological order.

Date	Event
March 2021	Implementation of pharmacy-based influenza and tick-borne encephalitis vaccinations
April 2021	Implementation of COVID-19 vaccination in pharmacies
June 2022	Implementation of pneumococcal vaccine in pharmacies

7. Strategies used to build initial collaboration and ongoing support with key stakeholders throughout the implementation process.

a. Non-pharmacist health professional groups	Nil known
b. Policymakers at the national/ministerial level	Nil known
c. The public	Nil known
d. Pharmacists and pharmacy technicians	Nil known

8. Key activities that led to the success of pharmacy-based vaccination.

Nil known

9. Challenges that pharmacists encountered during the implementation process, either at an individual, local or organisational level.

The most significant challenge faced by pharmacies was establishing vaccination rooms that met all regulatory requirements.

10. Future strategies for further advancing pharmacy-based vaccination.

The goal is to expand the range of vaccines offered in pharmacies and to provide vaccinations free of charge to eligible patients; a free service is limited only to the COVID-19 vaccine in 2023.

2.9.5 Section E: Impact of pharmacy-based vaccination

11. Published evidence of the impact of pharmacy-based vaccination, e.g., vaccination coverage rates, number of total doses administered in pharmacies, and the percentage of pharmacy-administered doses out of the total doses administered nationally.



No data available.

2.10 Norway

Member organisation	Norwegian Pharmacy Association
Authors	Tore Reinholdt, Hanne Andresen

2.10.1 Section A: Clinical coverage of pharmacy-based vaccination

1. Authorised vaccine types, population groups and vaccinators for pharmacy-based vaccination.		
Vaccine type	Eligible population	Authorised vaccinator
All inactivated vaccines	Anyone who is over 12 years old	Pharmacists, pharmacy technicians, pharmacy students, and nurses who have fulfilled the required training programme

2.10.2 Section B: Key policies and regulations of pharmacy-based vaccination

2. Presence of prescribing authority for vaccines and access rights to patient's vaccination records.	
Prescribing authority	Pharmacists are permitted to prescribe influenza vaccine permanently, however, for COVID-19 vaccines, the end date for prescribing authority is 30 June 2024.
Accessing medical records	Authorised vaccinators have access to SYSVAK (the Norwegian Immunisation Registry).
All other vaccines in the eligible list can be administered in pharmacies but have to be prescribed by a doctor.	
3. Practice and legislative changes in recent times.	
a. Practice guidelines and/or legislative requirements	Previously, the procedures for pharmacy-based vaccination were different across the pharmacy chains. On 1 September 2023, new and updated procedures and a framework for pharmacy-based vaccination were rolled out nationally upon agreement by all members of the Norwegian Pharmacy Association. The new national standard covers all vaccine types that are prescribed and administered in pharmacies (approximately 40 different vaccines).
b. Training requirements or certification	On 1 September 2023, competency requirements for pharmacy-based vaccination, including certifying examinations, were revised and implemented.
c. Requirements for vaccination premises	No changes.
4. Regional variations in regard to the regulations and requirements.	
None.	

2.10.3 Section C: Remuneration framework

5. Financial reimbursement or billing procedures to cover pharmacy-based vaccination services including the details of third-party payers.
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All COVID-19-vaccinations are reimbursed by the Norwegian government whereby pharmacies invoice the local municipality directly. Patients are required to pay out-of-pocket for all other types of vaccines.

2.10.4 Section D: Implementation processes

6. A brief timeline of the implementation process in chronological order.

Date	Event
2017	First-year the influenza vaccine was administered in pharmacies with prescriptions from a doctor
2018	First-year travel vaccines were administered in pharmacies
2019	Implementation of a national pharmacy practice standard for influenza vaccine administration
2020	Pharmacists were permitted to prescribe influenza vaccines Implementation of a national pharmacist standard for vaccine prescribing
2021	Pharmacists were permitted to prescribe COVID-19 vaccines (until 30 June 2024) Implementation of national pharmacy practice standards for prescribing and administering COVID-19 vaccines
2023	Implementation of a new national standard for all vaccine services in pharmacies.

7. Strategies used to build initial collaboration and ongoing support with key stakeholders throughout the implementation process.

a. Non-pharmacist health professional groups	Nil known
b. Policymakers at the national/ministerial level	<p>Engagement with political and health sector stakeholders. Examples of key stakeholders and engagement activity include:</p> <ul style="list-style-type: none"> • Active dialogue with representatives across the political spectrum in the parliament. • Coordination with the National Institute of Public Health, which also functions as a vaccine wholesaler. • Norwegian Medicines Agency. • The Norwegian Directorate of Health. • Ministry of Health and Care Services. • The Norwegian Health Authority. <p>Pharmacies have an integral role in vaccination efforts, as reflected by the national pharmacy practice vaccination standards that demonstrate very high quality. Pharmacies can reduce the workload of other health professionals and municipal services due to their long opening hours and accessibility to the public.</p>
c. The public	<p>Conducted surveys to gather public opinions regarding pharmacy-based vaccination</p> <p>Interviews/narratives of “happy patients” who received pharmacy-based vaccinations</p>
d. Pharmacists and pharmacy technicians	<p>Cooperation with the pharmacist union and the technicians' union. Development of the national pharmacy practice standards for vaccine services in close collaboration with:</p> <ul style="list-style-type: none"> • The Norwegian Pharmacy Association;

- The departments of professional affairs in pharmacy chains; and
- Hospital pharmacies.

8. Key activities that led to the success of pharmacy-based vaccination.

- Established rapport with parliamentarians who advocate the establishment of vaccination services in pharmacies.
- Observed positive collaboration between individual pharmacies and certain municipal authorities, providing referable case studies.
- Identified and utilised a legislative opportunity where there was no explicit ban on vaccine administration in pharmacies.

9. Challenges that pharmacists encountered during the implementation process, either at an individual, local or organisational level.

Prescribing rights for vaccines are tightly regulated, and addressing concerns from doctors who feared they might lose patient information due to pharmacy services took time. However, since all vaccinators, pharmacies included, are required to report to SYSVAK, the national register, these concerns have been mitigated.

10. Future strategies for further advancing pharmacy-based vaccination.

There is a need for the development and implementation of a comprehensive national adult vaccination programme in Norway. A follow-up on the parliamentary decision in June is critical; the government needs to evaluate the potential inclusion of pharmacies in the national vaccination programme.

The Norwegian Pharmacy Association is committed to advocating for pharmacists to have prescribing rights for a broader range of vaccines, specifically all inactivated vaccines.

2.10.5 Section E: Impact of pharmacy-based vaccination

11. Published evidence of the impact of pharmacy-based vaccination, e.g., vaccination coverage rates, number of total doses administered in pharmacies, and the percentage of pharmacy-administered doses out of the total doses administered nationally.

During the 2022/2023 influenza season, pharmacies administered 20% of all influenza vaccine doses. The Norwegian Pharmacy Association continuously monitors the quantity of vaccines dispensed and prescribed within pharmacies. A challenge lies in accurately determining the number of vaccines administered by other healthcare professionals.

2.11 Romania

Member organisation	Ethica Independent Pharmacies Association
Author	Cristina Pavel

2.11.1 Section A: Clinical coverage of pharmacy-based vaccination

1. Authorised vaccine types, population groups and vaccinators for pharmacy-based vaccination.		
Vaccine type	Eligible population	Eligible personnel for vaccine administration
Influenza	<p>Persons eligible for flu vaccination in the pharmacy must cumulatively meet the following criteria:</p> <ul style="list-style-type: none"> • People who have at least one previous flu vaccination; • People who are not allergic to ovalbumin or have not presented allergies to previous vaccinations; • People who are not allergic to any of the components of the vaccine; and • People who do not show signs of a febrile illness or acute infection. 	Licensed pharmacists who have obtained a certificate by completing the post-graduate seasonal influenza vaccination training programme
Other relevant details		
<p>The legislative framework was approved in November 2022, and it describes a pilot project for influenza vaccination in pharmacies. A detailed guideline for the vaccination service was also developed, as well as the criteria to be fulfilled in order for the pharmacy to be authorised for the influenza vaccination of the population. The courses are organised by accredited higher education institutions with a human medico-pharmaceutical profile, through the disciplines of epidemiology, infectious diseases, family medicine or emergency medicine. The certificate that pharmacist are obliged to have for performing influenza vaccination is valid for five years. The vaccination is carried out in the pharmacy at the request of the patient. The ministerial order and annexes are available at this link (In Romanian).</p>		

2.11.2 Section B: Key policies and regulations of pharmacy-based vaccination

2. Presence of prescribing authority for vaccines and access rights to patient's vaccination records.	
Prescribing authority	No
Accessing medical records	No
3. Practice and legislative changes in recent times.	
a. Changes to practice guidelines and/or legislative requirements	<p>Recently, it has been regulated that most vaccines, including the influenza vaccine, can be prescribed, dispensed and reimbursed by the state for certain populational groups. An important new regulation is the fact that people aged between 18 and 65 years with no chronic diseases can benefit from compensated influenza vaccine and have to pay out-of-pocket only 50% of the total cost. These patients represent the target population for the vaccination service in community pharmacies. Also, for the influenza vaccine</p>

	<p>this is quite a change in the patient pathway to vaccination in comparison with what was an easier way for patients to be vaccinated. The GP has to prescribe the influenza vaccine on an electronic prescription, the patient has to go with the prescription to the pharmacy to get the vaccine and then return to the GP's office to get vaccinated. Even though the vaccination process can take place in the pharmacies, because the service in the pharmacy is not reimbursed by the state and has to be paid for out-of-pocket by the patient, patients prefer to return to the GP to get vaccinated for free.</p>
b. Changes to training requirements and certification	No
c. Changes to requirements for vaccination premises	No
<p>4. Regional variations in regard to the regulations and requirements.</p>	
<p>No, the regulations are national.</p>	

2.11.3 Section C: Remuneration framework

5. Financial reimbursement or billing procedures to cover pharmacy-based vaccination services including the details of third-party payers.

The vaccination service in pharmacies is not reimbursed by the state, so patients have to pay out-of-pocket to get vaccinated. It is regulated that the sum that the pharmacy asks the patient for the influenza vaccination cannot exceed RON 40, which is the amount that is reimbursed to the GPs by the state for performing this service.

2.11.4 Section D: Implementation processes

6. A brief timeline of the implementation process in chronological order.

Date	Event
November 2021	The ministerial order that describes the methodology and the nomenclature for pharmaceutical services was approved by the Ministry of Health. One of the advanced pharmaceutical services stated is the vaccination service.
September 2022	The ministerial order for the vaccination pilot project was launched into debate by the Ministry of Health. All persons interested could send proposals or observations regarding the project.
End October – November 2022	The ministerial order was officially approved so the vaccination project could begin.
November – December 2022	Pharmacists participated in postgraduate courses on vaccination in order to gain the competences needed to evaluate patients and perform vaccination.
January 2023	The vaccination process began in community pharmacies. Vaccination is performed at the request of the patient, who has a recommendation from a medical doctor. The patient pays for the service directly to the pharmacy.

7. Strategies used to build initial collaboration and ongoing support with key stakeholders throughout the implementation process.

a. Non-pharmacist health professional groups	Very few meetings were organised with other health professionals and those took place before the approval of the legislative framework. Also, those meetings were mostly organised by the representatives of the public institutions.
b. Policymakers at national/ministerial level	The pilot project received great support from authorities that are very interested in vaccination and ways to improve vaccine uptake. Not much was needed to convince them.
c. The public	Starting this influenza season, vaccination campaigns are more visible — the Ministry of Health started in August a public campaign that supports vaccination in general, funded through ROVAC-SIPOCA . Also, market authorisation holders started their own campaigns for influenza vaccination in particular, mentioning that this service is available in pharmacies.
d. Pharmacists and pharmacy technicians	There are no incentives from the state for a pharmacy or a pharmacist to provide this service. It is up to each pharmacy or pharmacy chain to decide whether to provide the vaccination service or not. Some pharmacies offer to pay for the vaccination courses for their pharmacists. Also, some pharmacies pay an amount of money to the pharmacists for each vaccine administered.

8. Key activities that led to the success of pharmacy-based vaccination.

We provided our members who are authorised to provide the vaccination service with marketing materials for patients. We are making efforts to get the vaccination services reimbursed by the state, and our actions started in this matter as soon as the pilot project was launched.

9. Challenges that pharmacists encountered during the implementation process, either at an individual, local or organisational level.

Because of the cost difference, as explained, the vaccination service is free for the patient at the GP surgery, whereas in the pharmacy the patient has to pay an out-of-pocket expense. (Some pharmacies offer the vaccination for free, mostly pharmacies chain that can afford this.) Patients are reluctant to get the vaccine in the pharmacy, especially those in special population groups such as the elderly.

10. Future strategies for further advancing pharmacy-based vaccination.

At the moment, our organisation is aiming at getting vaccination services in community pharmacies to be reimbursed by the state, because not many pharmacies want to get authorised for this service and not many patients attend a pharmacy to get the vaccine administered. We are convinced that many more pharmacies would get involved if the service would not involve costs for the patients and would be compensated by the state. Therefore, our actions will focus on this in the near future. If the influenza vaccination service will be reimbursed by the state, then we can make other plans and strategies for other types of vaccines that can be administered.

2.11.5 Section E: Impact of pharmacy-based vaccination

11. Published evidence of the impact of pharmacy-based vaccination, e.g., vaccination coverage rates, number of total doses administered in pharmacies, and the percentage of pharmacy-administered doses out of the total doses administered nationally.

There have been no data available until now. The only related information is the number of pharmacies that are authorised for the vaccination service at the moment, available to view on the Ministry of Health [web page](#). There are 344 pharmacies nationally that can perform influenza vaccination. The number has increased significantly from last year, at the first round of vaccination in community pharmacies.

2.12 Country updates

This section complements the full case studies above with brief descriptions of recent developments in other countries for which a case study was not received. These updates were authored by the FIP team based on desktop research. The information presented in this section is referenced and the information is available through the relevant hyperlinks, often in the countries' languages. All updates are dated as of November 2023. The six countries presented are Algeria, Latvia, Poland, Saudi Arabia, Tunisia and the United Arab Emirates.

2.12.1 Algeria

Traditionally, only doctors were authorised to administer vaccines in Algeria.²³ However, in August 2021, responding to the ongoing COVID-19 pandemic in the country, the Algerian Ministry of Health issued a decree allowing pharmacists in community pharmacies to administer vaccines for the first time.²⁴ To assist pharmacists in this new role, a vaccination guide for community pharmacists and an online training course were introduced.²⁵ Pharmacies had to obtain certification from the course and ensure the availability of necessary facilities such as air conditioning, refrigeration systems, and emergency kits to be eligible to administer vaccines.²⁵ This governmental decision empowered approximately 11,000 community pharmacies across the country to provide vaccination services, alongside pharmacists working in public and private hospitals and local health centres, thereby strengthening the healthcare workforce capacity.^{24, 26} Building on the success of COVID-19 vaccination, the government expanded the scope to include influenza vaccinations in community pharmacies in 2022.²⁴

While the COVID-19 vaccine is offered free of charge to all in community pharmacies, the influenza vaccine may be purchased or reimbursed for patients covered by the National Fund for Social Security of Salaried Workers (Caisse Nationale des Assurances Sociales — CNAS).²⁷ Patients without insurance coverage must purchase the influenza vaccine, although the administration services are provided free of charge by pharmacists, whether for COVID-19 or influenza.²⁷

2.12.2 Latvia

On 25 November 2021, Latvia's parliament passed in the second and final reading amendments to the Epidemiological Safety Law that authorises pharmacists to administer COVID-19 vaccines.²⁸ Following this update, a requirement from the Cabinet of Ministers to determine the professional competence requirements for pharmacists to perform vaccination was still in place to further include them as part of the certification process for future immunisations from pharmacists.²⁹ Pharmacies are free to choose if they wish to be part of this initiative as vaccination providers and besides COVID-19 there is also the inclusion of seasonal flu and tick-borne encephalitis as available vaccines.²⁹ The amendments also indicate that pharmacists who detect complications caused by vaccination should report them immediately.³⁰ Pharmacists are entitled to carry out vaccinations if their professional competence is confirmed by a course on vaccination at a university.³¹ To ensure access to the electronic shared vaccine information registry against COVID-19 the pharmacy and the pharmacist must be registered with the Health Inspectorate.³¹

2.12.3 Malta

The Malta Chamber of Pharmacists held a successful international seminar in 2021 on "Pharmacist-driven life course vaccination uptake in the community". This was the Chamber's first online continuing professional development programme, which included a strong FIP participation among the speakers. This was followed by the training of pharmacists in basic life support and on the use of an automated external defibrillators, leading up to certification by the European Resuscitation Council (2021–23) in October–December 2021, and in vaccine administration.

Although the Chamber has established dialogue with other healthcare professionals and institutions that have offered support as well as with health authorities, it has encountered hurdles to accredit pharmacists as vaccinators on terms of "policy", which have precluded the implementation of pharmacist-led vaccination in pharmacies for the time being. The Chamber continues to advocate and take steps towards leveraging community pharmacists as vaccinators.

2.12.4 Poland

In Poland, there has been an expansion of pharmaceutical services to enhance the public health benefits of available vaccines, including the administration of vaccines in pharmacies. The expansion of vaccination services in the community aims to improve overall coverage, increase vaccine uptake and reduce healthcare expenditures among patients.³² It aligns with a goal of the World Health Organisation (WHO), namely, increasing vaccination rates in populations to reduce cases and healthcare costs.³³

In 2019, the first Polish vaccination workshop (by Pharmacists Without Borders) was organised, providing training for 700 pharmacists in vaccine administration.³⁴ This workshop, conducted in collaboration with Emergency Care Gateway, an accredited NHS training provider, addressed various topics such as the proper administration of intramuscular injections, as well as the diagnosis and treatment of patients exhibiting symptoms of anaphylaxis and cardiac arrest. Upon successful completion, participants received European certification in vaccination and injections in pharmacies (*ISO 9001 Quality Management), accredited by the Royal Pharmaceutical Society (UK) and Collegium Medicum at the Ludwik Rydygier Medical College in Bydgoszcz.³⁵

Following the Pharmacists Without Borders workshop, a study was carried out to evaluate the readiness and willingness of pharmacists to provide vaccination services. The findings indicated that pharmacists were generally well-prepared to administer vaccines, although there was a recognised need to augment their knowledge of vaccination. The study participants also highlighted key factors affecting the readiness to administer vaccines in pharmacies, such as the accessibility of pharmacies for patients and the active role pharmacists can play in promoting vaccinations.³⁵

Since 2021, pharmacists in Poland have been authorised to administer COVID-19 vaccinations. In April 2021, an amendment to the legislation was adopted, incorporating COVID-19 vaccination into the expansion of pharmaceutical services.³⁶ Following this amendment, Polish pharmacists have been authorised to vaccinate healthy adults since July 2021, contingent upon the successful completion of training and the acquisition of a relevant certificate of competence for vaccination.³⁷ These qualifications are obtained through a two-stage course that covers both theoretical and practical training. The theoretical component addresses medical concerns, such as indications and contraindications for vaccinations, while the practical component focuses on ensuring accurate digital documentation of vaccinations.³⁸

Alongside the authorisation for COVID-19 vaccination, the Act of 17 November 2021, amending the Act on healthcare services financed from public funds, outlined the role of pharmacists in influenza vaccination. The qualification examination for adults, aimed at excluding contraindications before influenza vaccination, can be carried out by a physician or pharmacist, though only a physician is authorised to prescribe. Once an adult patient obtains a prescription, qualified pharmacists are allowed to administer influenza vaccines.³⁹

As of November 2021, approximately 20% of qualified pharmacists in Poland had completed their training for administering COVID-19 vaccines. From July 2021 to March 2022, pharmacies administered vaccines to more than 1.8 million people, representing around 7–8% of the total COVID-19 vaccine doses administered during that period.⁴⁰ Moreover, since 1 September 2022, more than 37,000 patients have received a flu vaccine at pharmacies for the 2022/2023 flu season.⁴¹

Several studies have been conducted to evaluate patients' satisfaction with pharmacist-administered COVID-19 vaccines in Poland. The findings suggest that patients prefer pharmacies for this service due to their convenient location and extended hours. This underscores the positive impact of convenience and accessibility, particularly for working-age groups, in influencing vaccination decisions.^{32,42} As a result, pharmacies are considered a more attractive option for vaccination than general practitioner (GP) practice.³² Additionally, patients in Poland are willing to receive vaccine administration by pharmacists again, expressing confidence in pharmacists' competencies to provide vaccination services. They also believe that pharmacists should be authorised to administer other protective vaccines.⁴³

Potential barriers to the implementation of vaccine administration in Polish pharmacies have been identified. Pharmacists cited challenges such as heightened workload, inadequate vaccination training for pharmacists, and a lack of infrastructure within pharmacies to support vaccination services.³⁵ There is currently limited public awareness concerning the variety of health promotion services available in pharmacies. Therefore, in

addition to improving the accessibility of vaccination services in the community, it is imperative to initiate campaigns focused on disseminating information about these services, including their purposes and benefits. Further legislation covering the standardisation of patient service requirements or reimbursement for pharmaceutical services is needed to implement pharmacy-based vaccination in Poland.³²

Regarding reimbursement for pharmaceutical services, the Ministry of Health issued an announcement on 9 October 2023 addressing the financing of preventive vaccinations in pharmacies,⁴⁴ which became effective as of 1 November 2023. This enables the National Health Fund to engage in agreements with publicly accessible pharmacies and allocate public funds for the administration of recommended vaccines in pharmacies.⁴⁵ Starting from 2 November 2023, applications can be submitted to the provincial branches of the National Health Fund (NFZ), which has jurisdiction over the pharmacy's location. According to this announcement, pharmacies entering into an agreement with the NFZ are authorised to administer vaccines. Pharmacists, upon completion of their vaccination training, are allowed to administer vaccines to patients who have been qualified for vaccination by a physician. This includes administering COVID-19 vaccines, as well as vaccines for influenza and pneumococcal disease, specifically for individuals aged 65 and older.⁴⁶

2.12.5 Saudi Arabia

In the Kingdom of Saudi Arabia (KSA), community pharmacists were enlisted to provide COVID-19 vaccines during the COVID-19 pandemic in 2021. The vaccination service was made available in all healthcare facilities, including community pharmacies, and was free to all residents. The Ministry of Health issued a blueprint to ensure the quality of the service and provided programmes for error-free immunisation services.⁴⁷⁻⁴⁹ Prior to becoming certified vaccinators, pharmacists were required to undergo specific training for COVID-19 vaccination.^{47, 49, 50} Despite being a relatively new practice, pharmacy-based vaccinations hold considerable promise for enhancing immunisation rates and overall public health in the country.⁴⁹

Public opinion in KSA appears favourable toward expanding pharmacy services, as demonstrated by a 2021 survey where 68% of respondents endorsed the idea of community pharmacies offering a wider array of services, such as vaccinations, prescribing medicines, health assessments and preventive care, demonstrating significant confidence in pharmacists' capabilities.⁴⁹ Adding to this context, approximately 63% of participants expressed satisfaction with receiving a COVID-19 vaccine from a community pharmacist, reflecting an openness to utilising pharmacists for primary healthcare services.⁴⁹

Additionally, a 2018 study highlighted that most pharmacists seem prepared to administer immunisation services to potentially increase vaccination rates, especially among older adults.⁵⁰ However, some reluctance from pharmacists persists due to training and safety concerns, highlighting the need for ongoing professional development and specialised immunisation training to facilitate these expanded roles.⁵⁰

2.12.6 Tunisia

Pharmacists in Tunisia were granted legal authorisation to administer vaccines in August 2021. This was a result of collaboration among the National Council of the Order of Pharmacists of Tunisia, the Union of Community Pharmacists of Tunisia and the Ministry of Health.⁵¹ In the context of the COVID-19 pandemic, authorities prompted pharmacists to volunteer and provide vaccinations at no cost.⁵² Additionally, the government introduced the Evax online platform to support citizens in scheduling vaccination appointments at their local pharmacies.⁵³ To assist pharmacists in this new role, an online Guide for Vaccination against COVID-19 in Community Pharmacies in Tunisia was launched, along with a mandatory online training course.⁵² Authorities emphasised the importance for each community pharmacy offering vaccinations to train their staff and ensure they had all the necessary equipment.^{51, 52} The success of providing COVID-19 vaccinations in community pharmacies led the government to extend vaccination services to influenza according to latest communications from the Union of Community Pharmacists of Tunisia in October 2023.⁵⁴

2.12.7 United Arab Emirates

In the United Arab Emirates (UAE), there is a significant shift under way to make vaccines more accessible. A 2022 article highlighted that pharmacies across the nation would soon start offering COVID-19 and influenza vaccinations,⁵⁵ which indeed happened in 2022. This move was designed to simplify the vaccination process for citizens and residents, aiming to boost immunisation rates. The government emphasised that this initiative caters to those with busy schedules, allowing easy access to vaccines at their local pharmacies.⁵⁵

To ensure this service is rolled out effectively, pharmacies are required to be licensed by the relevant authorities — a process that began in 2022 in Abu Dhabi and Dubai, with plans to extend to the northern emirates.⁵⁵ Compliance with certain criteria is mandatory for pharmacies to administer vaccines, including employing pharmacists who have completed specific training and having infrastructure that meets set standards.

Each emirate enforces its health regulations: Abu Dhabi's Department of Health (DOH) and Dubai's Health Authority (DHA) both set and maintain health service standards, including vaccine administration by pharmacists.⁷ While pharmacists in the UAE are allowed to administer vaccines after proper training, the professional authority to prescribe vaccines is not yet established.

In Abu Dhabi, the DOH has established a [standard on the administration of vaccines in outpatient pharmacies](#).⁵⁶ This standard applies to all outpatient pharmacies and pharmacists licensed by the DOH as a pharmacy vaccinator and involved in administering the vaccines permitted to be provided in outpatient pharmacies in this emirate for population aged 18 years and above. To offer vaccination services, pharmacies must navigate an e-licensing process, employ at least two pharmacists who have completed the necessary training and vaccination courses, and ensure that the infrastructure of their facilities meets the essential standards. These pharmacists must hold a certification in vaccination competency, be trained in basic life support and stay updated with the latest best practices and training modules.⁵⁶

In Dubai, the DHA has set forth [comprehensive guidelines](#) for pharmacies, designed to ensure adherence to federal laws, local regulations and international best practices within pharmaceutical care. These guidelines underscore the pharmacist's role in delivering best practice healthcare, improving medication prescribing, and advocating medication safety.⁵⁷ The DHA introduced a [clinical guideline](#) in 2023 outlining optimal practices in immunisation, which includes the administration of vaccines and injectable medicines. According to this guideline, it is the responsibility of physicians, nursing staff and paramedical personnel to report any adverse events following immunisation to the pharmacist or deputy in charge.

The UAE offers COVID-19 vaccines free of charge to medically eligible individuals. The National Policy on Vaccinations provides a framework for combating communicable diseases and ensuring the quality of preventive care, but it does not clarify the role of pharmacists in vaccine administration or prescribing.⁵⁸ Appointments for COVID-19 vaccinations are managed by Emirates Health Services or Abu Dhabi Health Services Company.⁵⁹

In the UAE, the Ministry of Health provides an e-service to the population through the [My Health application](#), which enables beneficiaries to view their personal vaccination registry. It is not clear whether pharmacists have access to this information, or if they are authorised to register the vaccines they administer in this system.

3 Insight board discussion

For several years, FIP has been advocating a broader role by pharmacists in vaccination, based on the conviction that improving vaccination coverage and promoting a life-course approach to vaccination are global imperatives to which pharmacists can greatly contribute.

At the recent FIP Congress in Brisbane, in September 2023, the FIP Council unanimously approved a new statement of policy on the role of pharmacy in life-course vaccination, which includes various recommendations to different groups of stakeholders, including policymakers, pharmacy professional organisations, academic institutions and CPD providers, and pharmacists themselves.

In recent years, and particularly since the pandemic, pharmacy-based vaccination has been introduced or expanded in several parts of the world, bringing the number of countries with pharmacy-based vaccination to at least 48, according to FIP data. This consolidated trend is aligned with the increasing participation of pharmacies in primary healthcare delivery and contributes to changing public perceptions of the role of pharmacies and the services they provide beyond dispensing medicines and pharmaceutical care.

However, the provision of vaccination services requires changes in legislation or regulations, scopes of practice, education and training, supply logistics or even pharmacy space requirements. In addition, several roadblocks, including the opposition of other professions, can hinder the implementation of this important change in pharmacy practice.

FIP wishes to continue monitoring the evolution of pharmacy-based vaccination services around the world, and to support its member organisations in advocating and introducing such services in their countries. With this in mind, FIP organised an insight board meeting with a group of member organisations from countries where new roles by pharmacies in vaccination are emerging, or who are at different stages of advocating or navigating the process of introducing such services.

This meeting not only provided an opportunity to discuss roadblocks and share solutions among a network of peers, but it also informed the production of this report that can benefit member organisations beyond those attending the meeting. A summary of the main insight is presented in the Tables below:

- Priority assigned by pharmacy organisations to pharmacy-based vaccination, and rationale — Table 1
- Current regulations, policies and barriers — Table 2
- Public perceptions of the role of pharmacists as vaccination providers and attitudes and concerns of other healthcare providers in relation to pharmacy-based vaccination — Table 3
- Funding of vaccination services in the country, including possible scenarios of reimbursement of pharmacy-based vaccination — Table 4
- Concluding remarks — Table 5
- Responses submitted in written text — Table 6

3.1 Participants

Online participants:

- Estonian Pharmacies Association — Ms Ly Rootslane, head
- Lebanese Order of Pharmacists — Dr Luna El-Bizri, FIP consultant
- Malaysian Pharmacists Society — Mr Amrahi Buang, president
- Pharmaceutical Society of Singapore — Ms Grace Chew, council member
- Indian Pharmaceutical Association — Mr Raj Vaidya, immediate past vice president
- Pharmaceutical Society of Ghana — Dr Dennis Sena Awitty, executive secretary

Apologies:

- Pharmaceutical Society of Hong Kong — Mr Dick Sung, president

Offline inputs received:

- Turkish Pharmaceutical Association
- Indonesian Pharmacist Association

- All-Ukrainian Pharmaceutical Chamber
- General Pharmaceutical Council of Spain

FIP team members who supported the event:

- Gonçalo Sousa Pinto, FIP lead for practice development and transformation (moderator)
- Farah Aqqad, FIP regional engagement, support and development manager
- Sherly Meilanti, FIP data and intelligence specialist
- Ruben Viegas, FIP practice development and transformation projects coordinator
- Nisa Masyitah, project and data support coordinator (Global Pharmaceutical Observatory)
- Kirsten Lee, FIP intern

3.2 Priority assigned by pharmacy organisations to pharmacy-based vaccination, and rationale

Table 2. Key insights regarding vaccine priorities assigned by pharmacy organisations to PBV

Member organisation	Key insights
Estonian Pharmacies Association	<ul style="list-style-type: none"> • Pharmacy-based vaccination is a top priority for the Estonian Pharmacies Association. PBV discussion in pipeline • Currently, only nurses are allowed to vaccinate at pharmacies (for six years), but discussions are under way to change legislation and permit pharmacists to administer vaccines. • Estonia is actively working on changing laws, implementing training programmes, and adopting IT solutions to enable pharmacy-based vaccinations soon.
Lebanese Order of Pharmacists	<ul style="list-style-type: none"> • In Lebanon, the prioritisation of pharmacy-based vaccination faces political and economic challenges due to the absence of a functioning government and parliament. • Clinical pharmacists are present in academic hospitals such as the American University of Beirut Medical Center but not in all hospitals. While there is a willingness to introduce clinical pharmacists in hospitals which meet the criteria (i.e., number of beds), the political situation hinders progress. • The current priorities in Lebanon focus on ensuring the availability of essential medicines, especially subsidised anti-cancer drugs, and implementing a new digital system (Medi track) for medication access. It is worth noting that only vaccines considered in the national calendar will be covered, which is not the case for the adult calendar. <p>The Ministry of Public Health (MoPH) in Lebanon primarily focuses its national vaccine calendar on the paediatric population. As a result, the coverage for vaccines in the adult population, particularly in terms of payment and accessibility, follows a different framework. The responsibility for adults paying out of pocket for their vaccines lies with the insurance companies, who act as third-party payers.</p> <p>The coverage criteria for adult vaccines by insurance companies are outlined in their policies. These policies specify that covered vaccines, particularly those provided in single-shot vials, are determined based on the vaccines deemed obligatory by the Lebanese Ministry of Health. Furthermore, the quantity and vaccination schedule for these vaccines align with recommendations from the American Advisory Committee on Immunology affiliated with the Centers for Disease Control and Prevention in Atlanta, Georgia, USA.</p> <p>Under the purview of the insurance company, the coverage extends to specific medical services and procedures, including the administration of covered vaccines. However, certain conditions apply.</p>

	<p>Eligible expenses for vaccines are reimbursed at preferential tariffs if delivered for infants under the age of 15 years.</p> <p>To benefit from vaccine administration, the insured individual must provide the attending physician with their personal Access Card and other documents.</p> <p>It is important to note that the insurance company does not cover vaccination for epidemic or pandemic diseases, nor does it cover any resulting complications or consequences that may require hospitalisation or any other form of in-hospital and out-of-hospital claims. Out-of-hospital medical expenses, including ambulatory services, screening tests, medication, prevention treatment, vaccination and doctor's consultations, are also excluded from coverage.</p> <p>Additionally, all benefits related to the Prescription Medicine Benefit Plan are limited to products dispensed exclusively through participating healthcare providers in Lebanon. The insurance company typically covers 85% of the prescribed medicines bill, excluding doctor fees, and this coverage is subject to any applicable coinsurance or deductibles as specified in the policy schedule.</p> <ul style="list-style-type: none"> The Lebanese law of practising the pharmacy profession allows pharmacists to exclusively sell vaccines in community, ambulatory and other practice settings. However, the corresponding legislation does not describe the scope of pharmacy practice in administering vaccines and other injectable medicines. A published example describes this aspect in Lebanon. <p>According to the Lebanese Order of Pharmacists and the Ministry of Public Health (MOPH) laws, pharmacists should be always present during a pharmacy's opening hours. However, they are not permitted by law to administer vaccines. Their role is restricted to dispense vaccines received from pharmaceutical companies. This year has witnessed a debate about allowing pharmacists to administer influenza vaccine as applied in other countries. Subsequently, the MOPH has issued memorandum no. 149 on 6 October 2020 to assert the restricted role of community pharmacists with regard to vaccine administration. However, based on some observations and a research example, it is commonly found that many pharmacists provide influenza vaccines to their patients as part of their current practices.</p> <ul style="list-style-type: none"> Training of pharmacists — new curricula are being introduced in pharmacy schools.
Malaysian Pharmacists Society	<ul style="list-style-type: none"> In Malaysia, the situation is quite particular due to the dichotomous healthcare system. There is a lack of separation of roles in the healthcare system between prescribing and dispensing medicines in the private sector whereas it is present in the public health sector. The national immunisation programme primarily focuses on paediatric vaccinations, and there is a need to address vaccinations for the entire life course, including future readiness to provide life-course vaccination. Malaysia does not have a well-established framework for pharmacy-based vaccination services: The pandemic highlighted the role of pharmacists in vaccinations, and recent developments in healthcare policy indicate a shift towards preventive and promotive care. Prevention of diseases is becoming a national priority. However, there has been no study in Malaysia to gauge public perception on PBV hence a conclusion cannot be formed. Malaysia is preparing for future roles in vaccination and is collaborating with universities to train pharmacists in vaccination. National healthcare financing is a challenge that needs to be addressed to facilitate pharmacy-based vaccinations.
Pharmaceutical Society of Singapore	<ul style="list-style-type: none"> In Singapore, pharmacists are enthusiastic about providing vaccines and are aiming to offer a comprehensive suite of vaccination services. They believe that all aspects of vaccination, including administering and prescribing, should be included to ensure successful vaccination programmes. However, they are awaiting approval from the relevant authorities and are also working on logistics to support their vaccination

	<p>efforts. There are pharmacists in Singapore who are already trained to administer vaccines, and they are committed to providing this service.</p> <ul style="list-style-type: none"> • National urgency to enable pharmacy-based vaccination. • Maintaining interest among all stakeholders. • Stock wastage, e.g., not enough turnaround of influenza vaccine stock compared with COVID-19 vaccines. • Singapore’s ministry of health chief pharmacist’s office has formed a small task force with a plan to run a pilot programme in some locations.
Indian Pharmaceutical Association	<ul style="list-style-type: none"> • In India, the IPA has shown keen interest in training pharmacists for vaccinations. • A collaboration with FIP was initiated to train pharmacists in India for vaccination. • Delays have occurred, but the first batch of clinical pharmacists is expected to be trained in December, with plans to establish a train-the-trainers programme. • Pharmacy-based vaccination can have a significant impact in India, especially in areas with limited access to physicians. • Vaccination has been included in pharmacy curricula to further support this initiative.
Pharmaceutical Society of Ghana	NA

3.3 Current regulations, policies and barriers

This section of the insight board explored the limitations and needs that exist in each country in terms of regulations and policies to enable pharmacy-based vaccination, as well as other existing barriers that may hinder the implementation of PBV services. Country representatives were also asked about the readiness of pharmacies in their countries to administer vaccines, such as in terms of infrastructure, logistics and supply chain, training and resources.

Table 3 - Key insights regarding current regulations, policies and barriers

Member organisation	Key insights
Estonian Pharmacies Association	<p>Estonia has been working on adapting its regulations and policies to enable pharmacy-based vaccination services.</p> <p>Regulations and policies:</p> <ul style="list-style-type: none"> • Estonia is in the process of changing several laws to allow pharmacists to vaccinate, which signifies a proactive approach to regulatory adaptation. Current legislation defines pharmacists as health professionals, but not as healthcare providers, which prevents pharmacists from providing vaccination and other services. • A critical issue is the accessibility of patients’ health records for pharmacists. Currently, pharmacists are not allowed access to digital health records, limiting their ability to provide comprehensive vaccination services. • Reporting of adverse reactions to vaccination is another regulatory challenge. Estonian pharmacies are currently not authorised to send such reports. <p>Barriers:</p> <ul style="list-style-type: none"> • A significant barrier has been resistance from general practitioners (GPs) who are concerned about pharmacists administering vaccines, primarily due to financial reasons. A new council of GPs was elected a few weeks ago so the conversations might become more fluid. • The legislative changes required for pharmacists to access health records and expand their vaccination capabilities will take some time to implement fully. • Estonia’s pharmacies are well-prepared in terms of infrastructure and resources for vaccination services, with the main barriers lying in regulatory and legislative changes. <p>Infrastructure:</p>

	<ul style="list-style-type: none"> • Pharmacies in Estonia have private rooms designated for vaccinations. Infrastructure and supply chain are already in place. • They possess the necessary equipment and IT solutions for vaccine administration.
Lebanese Order of Pharmacists	<p>Lebanon has been making efforts to incorporate pharmacy-based vaccination services:</p> <p>Regulations and policies:</p> <ul style="list-style-type: none"> • There is no current legislation in place. Legislation is being delayed from being passed in the parliament as there is an absence of political decision-makers. • The Lebanese Ministry of Public Health oversees vaccine-related policies (including paediatric vaccination). • Collaboration with professional pharmacy organisations is ongoing. <p>Barriers:</p> <ul style="list-style-type: none"> • The primary challenge is the resistance of GPs and paediatricians who rely on vaccination fees as a significant source of income and are concerned about potential revenue loss. Their protests at the Ministry of Health prompted pharmacists to emphasise their commitment to maintaining the integrity of the cold chain, even in challenging circumstances. • Administrative challenges in streamlining regulations. • Additionally, life course and adult immunisations are not prioritised, and obstacles related to accessing medical records further complicate the vaccination landscape in the region. Currently pharmacists are unable to access medical records. <p>Readiness of pharmacies:</p> <ul style="list-style-type: none"> • Some pharmacies have suitable infrastructure for vaccine administration. Infrastructure readiness varies by location. • Logistics networks for vaccine distribution are being established. There is good infrastructure in place such as vaccine supply and cold chain management. Challenges exist in ensuring a consistent vaccine supply. • Pharmacists have been unofficially providing influenza vaccines. • Training programmes for pharmacists are being developed. The availability of resources and guidelines is improving.
Malaysian Pharmacists Society	<p>Malaysia has a well-established framework for pharmacy-based vaccination services.</p> <p>Regulations and policies:</p> <ul style="list-style-type: none"> • Pharmacists are not allowed to administer vaccines independently. • Clear regulations allow pharmacists to administer vaccines. • Vaccination services are managed by the Ministry of Health, guided by the “national immunisation calendar” of Malaysia. • The Family Health Development Division under the Ministry of Health oversees these services. • Robust regulatory guidelines ensure quality and safety. <p>Barriers:</p> <ol style="list-style-type: none"> 1. Ongoing updates are required to align with evolving vaccine recommendations. 2. Public awareness and trust-building remain important. 3. Currently, pharmacists engaged in the national health system primarily handle logistical aspects rather than administering vaccines. To address this, there is a need to reclassify vaccines as group C or pharmacist-only medicines. This reclassification would emphasise the role of pharmacies in vaccine management and eliminate the requirement for a prescription. <p>Note: Vaccines in Malaysia are controlled under the first schedule of Group B, Poisons Act 1952 where it is doctors-only medicine that can be dispensed by pharmacists with a prescription. Group C is pharmacists-only medicine.</p> <p>Readiness of pharmacies:</p>

	<ul style="list-style-type: none"> • Most community pharmacies do not have dedicated vaccination areas and cold chain facilities. • Pharmacists receive limited comprehensive training and professional development opportunities in vaccination. • Increasing pharmacists’ participation in government structures can enhance the likelihood of legislative changes that favour pharmacy-based vaccination policies. • Currently working with doctors to implement PBV by running pilot programmes in some pharmacy schools
<p>Pharmaceutical Society of Singapore</p>	<p>Singapore has been proactive in allowing pharmacists to provide vaccination services. The regulatory framework is relatively supportive, but there are still some challenges to address.</p> <p>Regulations and policies:</p> <ul style="list-style-type: none"> • Pharmacists are proposing to administer vaccines under specific conditions, with clear guidelines drawn up. • Each vaccine requires distinct legislative adjustments for both administration and prescription. Moreover, they necessitate designated spaces within the pharmacy for these activities. To facilitate this process, the Pharmaceutical Society of Singapore is exploring the possibility of initiating a pilot programme in specific locations. This approach would allow for incremental regulatory changes based on the outcomes of these trials. • The Health Sciences Authority regulates vaccines, ensuring safety and quality. <p>Barriers:</p> <ul style="list-style-type: none"> • While the regulatory framework is favourable, there is a need for continuous updates and adjustments to accommodate evolving vaccine requirements. • Ensuring pharmacists remain up to date with the latest vaccination practices and guidelines is an ongoing challenge. • Building public awareness and trust in pharmacy-based vaccination services is essential. <p>Readiness of pharmacies: Singapore's pharmacies are well-prepared to administer vaccines, with a strong focus on safety and quality:</p> <ul style="list-style-type: none"> • Pharmacies in Singapore have suitable infrastructure, including dedicated areas for vaccination. • Cold chain facilities ensure the proper storage of vaccines. • Singapore’s well-developed healthcare system and logistics network facilitate the efficient distribution of vaccines. • Vaccines are widely available across the country, making access convenient for patients. • Pharmacists undergo comprehensive training, comprising APhA certification, on-the-job training, as well as continual assessment. • There is a strong emphasis on continuing education and professional development.
<p>Indian Pharmaceutical Association</p>	<p>In India, regulations and policies regarding pharmacy-based vaccination services have been evolving.</p> <p>Regulations and policies:</p> <ul style="list-style-type: none"> • The Indian government has gradually allowed pharmacists to administer certain vaccines, primarily for adults. • Policies vary by state, and some states have been more progressive in implementing pharmacy-based vaccination services. • The Ministry of Health and Family Welfare provides guidelines for vaccine administration. <p>Barriers:</p> <ul style="list-style-type: none"> • Limited pharmacist training and standardisation across states. • Variable acceptance and awareness among the public regarding pharmacy-based vaccinations. • Challenges in ensuring the maintenance of proper cold chain storage and vaccine quality.

	<p>Readiness of pharmacies: Pharmacies in India are at varying stages of readiness for vaccine administration.</p> <ul style="list-style-type: none"> • Many pharmacies have the necessary infrastructure, including cold storage facilities. • Availability of infrastructure varies by region. • Logistics networks exist but need improvement, especially in remote areas. • Pharmacist training programmes are being expanded, but consistency is an issue. • Resource availability and regulatory support vary across states.
Pharmaceutical Society of Ghana	<p>In Ghana, current regulations, policies and barriers related to pharmacy-based vaccination services are evolving but have made significant progress in recent years. The journey towards implementing pharmacy-based vaccination services faced initial resistance, but gradually gained support from key stakeholders.</p> <p>Regulations and policies:</p> <ul style="list-style-type: none"> • The Ministry of Health and the Food and Drugs Authority are the primary regulatory bodies overseeing pharmacy-based vaccination services. • Guidelines for the implementation of pharmacy-based vaccination services were developed, involving various stakeholders, including pharmacists, public health nurses and other experts. • The regulations have been amended to accommodate pharmacy-based vaccination services, ensuring that pharmacists meet specific requirements for training and certification. • Advocacy for vaccination started in 2018 with influence in the political sphere. <p>Barriers:</p> <ul style="list-style-type: none"> • Resistance from traditional healthcare providers, such as public health nurses, who initially viewed pharmacy-based vaccination services as a threat to their roles. • Concerns about maintaining the quality and safety of vaccines provided by pharmacies, leading to scepticism and hesitancy. • The need for extensive training and certification for pharmacists to administer vaccines requires investment in education and resources. • Ensuring a coordinated supply chain and logistics for vaccine distribution and storage, especially in remote areas, remains a challenge. <p>Readiness of pharmacies: Ghana's pharmacies are gradually becoming more ready to administer vaccines. The readiness is improving due to the collaboration of multiple stakeholders and the development of guidelines for practice.</p> <ul style="list-style-type: none"> • Many pharmacies have suitable infrastructure for vaccine storage and administration, including cold chain facilities. • Collaboration with public health facilities for vaccine supply and distribution ensures adequate infrastructure readiness. • Ghana's healthcare system has established logistics and supply chain networks for vaccine distribution, which can be leveraged by pharmacies. • Ensuring vaccines reach remote areas is still a challenge, but efforts are being made to improve access. • Pharmacists have received training on vaccine administration and storage, and this training is continuously improving. • Resources such as guidelines, educational materials and support from regulatory bodies are available to pharmacists. • The development of vaccination training in pharmacy school curricula is further enhancing readiness.

3.4 Public perceptions and attitudes of other HCPs about pharmacists as vaccinators

Table 4. Key insights regarding public perceptions of the role of pharmacists as vaccination providers and concerns of other healthcare providers in relation to pharmacy-based vaccination

Member organisation	Key insights
Estonian Pharmacies Association	<p>Public perceptions of the role of pharmacists as vaccination providers The Estonian participant mentioned that studies have been conducted where nurses provided vaccinations at pharmacies. Approximately 85% to 90% of people vaccinated at pharmacies were satisfied with the service, considering it highly professional and well-organised. The public had a positive perception of vaccination at pharmacies due to the convenience of extended hours, including weekends. They emphasised the need for pharmacist training and adequate equipment to handle emergencies and allergies.</p>
Lebanese Order of Pharmacists	<p>Public perceptions of the role of pharmacists as vaccination providers Adults generally trust pharmacists for vaccinations, but parents tend to prefer paediatricians for their children due to the perception of specialisation. The government supported accredited primary healthcare centres by the MoPH offering free vaccinations, which could impact public preferences.</p> <p>Attitudes and concerns of other healthcare providers in relation to pharmacy-based vaccination There are potential reservations from paediatricians due to their specialisation but a potential for pharmacy-based vaccinations, especially for adults. The Lebanese participant also mentioned the role of government-supported primary healthcare centres in Lebanon.</p>
Malaysian Pharmacists Society	<p>Public perceptions of the role of pharmacists as vaccination providers Public perception depends on the competence of healthcare providers. The public cares more about the competence of the healthcare provider than the specific profession. The Malaysian participant highlighted the need for government support and policies to facilitate pharmacy-based vaccination.</p> <p>Attitudes and concerns of other healthcare providers in relation to pharmacy-based vaccination There is a need for collaboration between different healthcare providers. Paediatricians might have reservations about pharmacy-based vaccination. However, with government support and a public-private partnership approach, pharmacists could play a vital role in expanding vaccination services.</p>
Pharmaceutical Society of Singapore	<p>Public perceptions of the role of pharmacists as vaccination providers While there is a lack of official data, the public's readiness for vaccinations appeared to be growing, particularly due to COVID-19. Practicality and safety would influence public acceptance. Pharmacy-based vaccinations could complement other providers and enhance accessibility.</p> <p>Attitudes and concerns of other healthcare providers in relation to pharmacy-based vaccination The participant from Singapore noted the practicality of pharmacy-based vaccinations and the need for collaboration among healthcare providers. There has been collaboration with nurses to share their vaccination experience via on-job-training for pharmacists. "Flu vaccines have been available for a long time but rates are not very high as GPs might be busy with other tasks. If pharmacists can recommend, prescribe and administer then they will increase uptake," she said.</p>
Indian Pharmaceutical Association	<p>Attitudes and concerns of other healthcare providers in relation to pharmacy-based vaccination The Indian participant discussed the acceptance of pharmacy-based vaccination by other healthcare providers. There is potential for pharmacists, with appropriate training, to provide vaccination services in areas with shortages. There is also potential opposition from paediatricians but the IPA sees opportunities in adult vaccination.</p> <p>Trained pharmacists can be useful both in private and public service and there would not be a lot of resistance against this.</p>
Pharmaceutical Society of Ghana	<p>Attitudes and concerns of other healthcare providers in relation to pharmacy-based vaccination</p>

	<p>The participant from Ghana discussed the readiness of pharmacists for vaccination services and emphasised the importance of training and infrastructure development. He did not provide specific insights into the attitudes and concerns of other healthcare providers.</p> <p>Currently, there is a lack of data regarding the public's perception of pharmacy-based vaccination. However, numerous television programmes are actively showcasing the vital role of pharmacists and working to enhance their public image. The belief is that once pharmacists engage in vaccination services effectively, a positive shift in public perception will naturally follow.</p>
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3.5 Funding and reimbursement of vaccination services

Table 5. Key insights regarding funding of vaccination services in the country, including possible scenarios of reimbursement of pharmacy-based vaccination

Member organisation	Key insights
Estonian Pharmacies Association	<p>In Estonia, the funding of vaccines depends on the type of vaccine. For example, COVID-19 vaccines are provided free of charge to everyone. Some vaccines, like the flu vaccine, are also free of charge for certain risk groups (those aged over 60). For other vaccines, individuals have to pay for both the vaccine and the vaccination service, unless the vaccine is covered by private health insurances. In those cases, the vaccination is paid for by the health insurance.</p> <p>Regarding the remuneration model for pharmacy-based vaccination, in Estonia, it is likely that pharmacists would be remunerated only if the vaccine is reimbursed by health insurance, such as COVID-19 and flu vaccines for older adults. Other vaccines, including encephalitis and travel vaccines, would typically be paid for by the patients themselves.</p>
Lebanese Order of Pharmacists	<p>There is no remuneration policy in place. Free vaccination by pharmacists out of goodwill is a common practice. However, there are significant economic challenges in Lebanon, making it difficult for people to afford vaccines even when they are available. Insurance companies do not cover vaccines, and patients must pay out of pocket. The situation is particularly challenging given the economic crisis in the country.</p> <p>Children can also go to PHC centers to receive free vaccinations. The Government is also prioritising paediatric vaccination over adults' vaccination in regard to funding.</p>
Malaysian Pharmacists Society	<p>In Malaysia, vaccines and vaccination services are mainly funded through out-of-pocket payments. Paediatric vaccines are covered by the national immunisation program and provided free of charge. However, adult vaccines are generally not reimbursed, and individuals have to pay for them directly. There is a need for clear policies to support and expand vaccination services, including exploring different funding options. Additionally, pharmacists providing vaccination services need proper insurance coverage in case of adverse events.</p>
Pharmaceutical Society of Singapore	<p>In Singapore, pharmacy-administered vaccinations has not yet started. The plan is to have them funded by out-of-pocket payments. However, there is a national adult immunisation schedule, and if individuals go to public institutions, they can get vaccinations funded to some extent or even for free. The government is making progress in funding vaccines through GPs, but community pharmacies are not part of this approach yet. The government is also exploring new funding models, but these are not ready for implementation.</p>
Indian Pharmaceutical Association	<p>In India, paediatric vaccines are generally covered under the national immunisation programme and are provided free of charge. However, adult vaccines are not typically reimbursed. COVID-19 vaccination, which was ongoing during the discussion, was also free of cost for the public. Adult vaccinations are mostly not reimbursed, and individuals have to pay for them out of pocket, which is a significant challenge as most healthcare expenses in India are out of pocket.</p>

Pharmaceutical Society of Ghana	In Ghana, the focus is mainly on adult vaccinations. Paediatric vaccinations are handled by the national immunisation programme, which is free of charge for children. However, adult vaccinations in Ghana are mostly out-of-pocket payments, even though health insurance exists. Very few adults are covered by health insurance, so most adult vaccinations require direct payment. Some vaccines, such as hepatitis B and travel vaccines, are among the few exceptions where people pay for their vaccination. In cases like HPV, these vaccines are paid for by the patients themselves.
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3.6 Concluding remarks

Table 6. Key concluding remarks

Member Organisation	Key insights
Estonian Pharmacies Association	Many countries are already implementing pharmacy-based vaccination, and competence is key. Training pharmacists well will help us move forward and gain acceptance in more countries.
Lebanese Order of Pharmacists	Building a strong case for pharmacists' involvement in vaccination and presenting it to the government is crucial. Public-private partnerships can be achieved if we demonstrate our commitment and competence.
Malaysian Pharmacists Society	Pharmacists are more than ready to expand their roles in vaccination, and it is time to take action.
Pharmaceutical Society of Singapore	The opportunity to expand pharmacy-based vaccinations will not be handed to us easily. We need to work hard and use this global community to share best practices and learn from each other.
Indian Pharmaceutical Association	We are all facing similar challenges, and there is a need for stronger advocacy from international organisations like FIP to engage with governments and drive progress.
Pharmaceutical Society of Ghana	The progress made in expanding the role of pharmacists in vaccination is significant, but we need to continue pushing and advocating our place at the table.

3.7 Responses submitted in written text

Table 7. Responses to the insight board questions submitted in written text

Member organisation	Key insights
Indonesian Pharmacist Association	<p>In Indonesia, the provision of vaccinations is currently reserved for medical professionals, as the government and the Indonesian health council believe the existing number of medical professionals is adequate for vaccination services. Despite pharmacists being recognised as healthcare professionals, the law does not permit them to administer vaccines; this task is designated to doctors and, if necessary, nurses or midwives can assist. During the COVID-19 pandemic, there was a proposal to the Indonesian president's office to allow pharmacists to vaccinate to expedite coverage. A plan was prepared and submitted to the Indonesian Health Council, but due to the vaccine's late arrival, the plan was not enacted. The military, however, recognised the value of pharmacists in this process and authorised a military pharmacist to vaccinate, a practice that was well-received and expanded within military circles. This was an exception based on military orders, and any further extension of vaccination rights to pharmacists would require approval from the Indonesian Health Council.</p> <p>Regarding pharmacy readiness, the Indonesian Pharmacists Association has already conducted basic training for vaccination during the pandemic. Nonetheless, the challenge of infrastructure, logistics and supply chain remains, as vaccine distribution is primarily managed by hospitals and primary healthcare centres. Public perception of pharmacists as vaccine providers is still nascent, although it has improved since the pandemic. There is a degree of</p>

	<p>resistance from other healthcare professionals towards allowing pharmacists to vaccinate, as they believe the current medical workforce is sufficient.</p> <p>Currently, there is no funding or reimbursement model for pharmacy-based vaccination since pharmacists are not authorised to provide this service. Additionally, one of the most significant challenges for vaccination uptake in Indonesia is the anti-vaccine sentiment, often influenced by religious beliefs.</p>
All-Ukrainian Pharmaceutical Chamber	<p>The All-Ukrainian Pharmaceutical Chamber (AUPC) has been a long-time proponent of pharmacy-based vaccination in Ukraine. Given the current conflict, maintaining high vaccination rates is crucial to prevent additional strain on healthcare systems, especially among vulnerable groups. Diversifying vaccination sites to include pharmacies could simplify the process and benefit both individuals and the healthcare system at large.</p> <p>The AUPC's engagement in dialogue with international peers could enhance its efforts by addressing specific challenges and incorporating global best practices. The collaboration with the American Pharmacists Association in 2019 marked a significant step towards involving Ukrainian pharmacists in administering vaccines.</p> <p>The Ukrainian Ministry of Health and parliament have initiated regulatory amendments to allow medical workers to administer vaccines. However, the proposed changes do not specify guidelines for pharmaceutical staff and premises, suggesting vaccinations could occur in pharmacy sales areas behind curtains, a practice the AUPC deems inappropriate.</p>
Turkish Pharmacists' Association	<p>Improving access to vaccines is critical to achieve targeted immunisation rates. Pharmacies, which play an important role in healthcare, are a key stakeholder in primary healthcare and disease prevention strategies in full coordination with healthcare systems and other healthcare professionals.</p> <p>Pharmacists are healthcare providers with a highly skilled workforce, trusted by their clients, with the infrastructure, logistics and cold chain management capability to ensure adequate storage and distribution of medicines and vaccines, and knowledge of medicines and preventive health care since their undergraduate education. The active involvement of pharmacists in immunisation services, including the administration of vaccines in pharmacies, would be beneficial not only for healthy individuals and patients, but also for physicians, nurses and the entire healthcare system, both in terms of health outcomes and economic benefits.</p> <p>In Turkiye, under the Expanded Programme on Immunisation led by the Ministry of Health, vaccines are generally administered by family practices in primary healthcare institutions.</p> <p>In the current system, beyond vaccination, individuals need to go through three stages to access immunisation services:</p> <ul style="list-style-type: none"> • Visit a primary care physician and have a prescription filled; • Go to a pharmacy with a prescription and obtain the vaccine; and • Take the vaccine received from the pharmacy and complete the vaccination service by going back to the prescribing health institution. <p>Not only does this situation make it difficult for patients to access vaccination services, but also vaccine quality is not assured, as it is not possible to accurately monitor whether the vaccine has been improperly stored (e.g., by taking a break for other work before returning to the physician and leaving the vaccine in a car parked in the sun) during the time it takes to dispense the vaccine to the patient to be delivered to the physician.</p> <p>This can lead to vaccine waste, as well as vaccination with a product that has lost its efficacy.</p> <p>Vaccination in the pharmacy will eliminate these quality risks that may arise from a break in the cold chain.</p>

	<p>The approach of the Turkish Pharmacists’ Association (TPA) and the activities conducted specific to the vaccine administration in pharmacies</p> <p>The fact that vaccine administration can also be carried out in the pharmacy according to the preference of the individual will provide significant gains in terms of time, costs, improving immunisation literacy and ease of administration, especially for the primary care system in the Turkish healthcare system, but also for other levels.</p> <p>Vaccination administration in pharmacies has many benefits, such as increasing vaccination rates, facilitating the vaccination of individuals in terms of access and working hours, encouraging vaccination by administering the vaccine at the place of receipt, reducing the workload of healthcare providers, eliminating the necessity for patients to visit the health centre again, protecting the risk of secondary infection, especially in the high-risk population for whom the vaccine is recommended, and financial benefits.</p> <p>With this regard, the TPA has carried out important work in 2021 to establish the legal framework for vaccine administration in pharmacies, to develop pharmacist competencies and to make pharmacies suitable centres for vaccination.</p>
<p>General Pharmaceutical Council of Spain</p>	<p>The Spanish National Health System guarantees all citizens relevant access to the different vaccines available. In Spain, vaccines are administered to citizens in authorised health centres by trained practitioners, which, in Spain, are nurses and technicians qualified to administer vaccines. It should also be noted that vaccination, like the rest of the health competencies in Spain, is managed and therefore the responsibility of the different Autonomous Communities. For the paediatric population, there are vaccination schedules that establish which vaccines and when they should be administered in order to guarantee a correct response to pathogens and reduce the prevalence of diseases with high morbidity and mortality in these patients. In the case of the adult population, there are different national vaccination strategies in Spain, arising from the needs arising at different times. In the early 1980s, the influenza vaccination campaign began and is now a recurrent campaign in the autumn/winter season. The vaccination campaign prioritises risk groups such as people over 60 years of age, people at high risk of complications from influenza, pregnant women in any trimester of gestation and women during the puerperium, people who can transmit influenza to those at high risk of complications (where we find health professionals) and other essential groups in the community to maintain critical services (such as police, firefighters, etc.).</p> <p>Also, as a result of the pandemic situation, the COVID-19 vaccination strategy was created, whereby the vaccination flow was established with the aim of immunising as many people as possible. Now, immunisation against COVID-19 is carried out through periodic campaigns in the same way as for influenza, in the autumn/winter season, when there is a higher incidence of the disease. It should be noted that this year both campaigns were carried out jointly, with the aim of increasing coverage against both diseases. In addition, some Autonomous Communities have established campaigns exclusive to their region for certain diseases, such as, for example, in the Community of Madrid, where immunisation against herpes zoster has been introduced for people at risk, those who turn 65 and those aged between 75 and 80.</p> <p>In Spain, pharmacists, as health professionals with expertise in medicines and therefore in vaccines, and as the first point of access for patients to the health system and where they can access information with scientific rigour — both because of the ubiquity of community pharmacies and their accessibility and proximity to citizens — has a highly valuable role to play in health education aimed at preventing multiple diseases through vaccination. For instance, during the COVID-19 pandemic, pharmacists showed they remain a trustworthy source of information to citizens (particularly important to fight against hoaxes and fake news that citizens were continuously exposed to). One of the lessons learned as well from the pandemic was that continuous training of health professionals, including pharmacists, about new vaccines or treatments is crucial to preserve public health.</p>

4 Conclusion

This report highlights the significant contribution of pharmacists to vaccination strategies from countries around the world, with a particular emphasis in countries where this service has been recently implemented or expanded.

The case studies received from FIP member organisations provide an in-depth understanding of some of the key enablers and strategies used in different countries to advance this expansion of pharmacists' scope of practice.

Of importance is that regulatory and legislative systems enable the different vaccination-related roles by pharmacists, in order to meet vaccination coverage goals, and generally improve uptake of the different vaccines available among the relevant population groups who can benefit from them. At the same time, training and certification pathways must be in place to ensure pharmacists are equipped to perform these roles with confidence and competence. Finally, appropriate remuneration models are essential to support the sustainable implementation of these services on a long-term basis, and to ensure equitable access to pharmacy-delivered vaccinations by all.

The insight board discussion provided an opportunity to identify roadblocks to the implementation of PBV and share solutions among countries facing challenges in developing such services. Furthermore, the discussion expanded to other important topics such as the public perception of pharmacists as immunisers, to provide insights about how well these services are accepted by the public once introduced.

In advocating pharmacists' vital contributions to vaccination strategies and the reduction of vaccine-preventable diseases worldwide, this report calls for collaborative efforts across different healthcare professionals and stakeholders. FIP will continue to work on advancing pharmacy worldwide and work towards more involvement of pharmacists in primary health care initiatives that support universal health coverage, such as vaccination programmes.

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