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# **PHARMACY SERVICES IN EUROPE: EVALUATING TRENDS AND VALUE**

## **EXECUTIVE SUMMARY**

December 2020



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**INSTITUTO DE SAÚDE BASEADA NA EVIDÊNCIA**

**INSTITUTE FOR EVIDENCE-BASED HEALTH**

Faculdade de Medicina da Universidade de Lisboa

Av. Prof. Egas Moniz

1649-028 Lisboa, PORTUGAL

[isbe@isbe.pt](mailto:isbe@isbe.pt) | <http://isbe.pt>

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## **FOREWORD**

The research study summarized in this Executive Summary is independent research commissioned by the Pharmaceutical Group of the European Union (PGEU) and prepared by a Research Team from Portugal led by the Institute for Evidence-Based Health (ISBE), assisted by an Expert Panel of Researchers from Italy and UK.

ISBE is a private independent non-profit research umbrella organization that bridges Researchers, Academia, Private Partners and Patients' Representatives, and is dedicated to the purpose of synthesizing, generating, disseminating, and translating the most relevant and high-quality scientific knowledge in health into practice.

The Pharmaceutical Group of the European Union (PGEU) is the association representing Europe's community pharmacists. PGEU members are the national associations and professional bodies of community pharmacists in 32 European countries, including EU Member States, EU candidate countries and EFTA members, representing more than 160,000 community pharmacies.

PGEU leadership and staff members were consulted to understand the context of the issue under study and collaborated on the development of the research questions and focus of this report, glossary of services and country data collection.

The full Report of this research study used 213 references and is currently under a temporary public embargo by PGEU until research papers are published by ISBE Research Team & Expert Panel.

The data for the country mapping were collected in September 2020.

The search dates were between 2013 and August 2020 for the overview of systematic reviews of pharmacy services and until 4 August 2020 for the review of pharmacy interventions on COVID-19.



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## RESEARCH TEAM & EXPERT PANEL

### Research Team

Suzete Costa<sup>1</sup>, PharmD, MPH (Principal Investigator)

Mariana Romão<sup>1,2</sup>, PharmD

Maria Mendes<sup>1,3</sup>, PharmD

Rute Horta<sup>1,3</sup>, PharmD

António Teixeira Rodrigues<sup>1,2</sup>, PharmD, PhD

António Vaz Carneiro<sup>1,4</sup>, MD, PhD, FACP, FESC

Ana Paula Martins<sup>1,5</sup>, PharmD, MSc, PhD

1 Institute for Evidence-Based Health (ISBE), Portugal

2 Centre for Health Evaluation & Research (CEFAR), National Association of Pharmacies, Portugal

3 Centre for Medicines Information and Health Interventions (CEDIME), National Association of Pharmacies, Portugal

4 Institute for Preventive Medicine and Public Health, Faculty of Medicine of the Universidade de Lisboa, Portugal

5 Social Pharmacy Department, Faculty of Pharmacy of the Universidade de Lisboa, Portugal

### Expert Panel

Zaheer Babar<sup>6</sup>, BPharm, MPharm, PhD, SFHEA (Pharmaceutical Policy & Practice)

Erika Mallarini<sup>7</sup>, MSc (Business Economics/Health Management)

Huseyin Naci<sup>8</sup>, MHS, PhD (Health Policy/Health Services Research)

6 Department of Pharmacy, University Huddersfield, UK

7 SDA Bocconi School of Management, Italy

8 Department of Health Policy, London School of Economics (LSE), UK



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The Research Team & Expert Panel would like to acknowledge the contribution of the following PGEU member associations in providing country replies and additional information used in this research for country mapping:

Austria	Österreichische Apothekerkammer
Austria	Österreichischer Apothekerverband
Belgium	A.P.B - Association Pharmaceutique Belge/Algemene Pharmaceutische Bond
Belgium	Orde der Apothekers – Ordre des Pharmaciens
Bulgaria	Български фармацевтичен съюз
Croatia	Hrvatska Ljekarnička Komora
Croatia	Hrvatsko Farmaceutsko Društvo
Cyprus	Παγκύπριος Φαρμακευτικός Σύλλογος (ΠΦΣ)
Czech Republic	Česká lékárnická komora
Denmark	Danmarks Apotekerforening
Estonia	Eesti Proviisorapteekide Liit
Finland	Suomen Apteekkariliitto / Finlands Apotekareförbund
France	Fédération des Syndicats Pharmaceutiques de France
France	Ordre National des Pharmaciens - Conseil Central A
France	USPO - Union des Syndicats de pharmaciens d'officine
Germany	ABDA - Bundesvereinigung Deutscher Apothekerverbände
Greece	Πανελλήνιος Φαρμακευτικός Σύλλογος
Hungary	Magyar Gyógyszerész Kamara
Ireland	Irish Pharmacy Union
Italy	Federazione Ordini Farmacisti Italiani (FOFI)
Italy	Federfarma
Kosovo	Oda e Farmacistëve të Kosovës
Latvia	Aptieku īpašnieku asociācija
Luxemburg	Syndicat des Pharmaciens Luxembourgeois a.s.b.l.
Malta	Kamra ta`l-Ispizjara ta` Malta
Netherlands	KNMP - Koninklijke Nederlandse Maatschappij ter bevordering der Pharmacie



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North Macedonia	Фармацевтска комора на Македонија
Norway	NAF – Apotekforeningen
Poland	Naczelna Izba Aptekarska
Portugal	Associação Nacional das Farmácias
Portugal	Ordem dos Farmacêuticos
Romania	Colegiul Farmacistilor din Romania
Serbia	Farmaceutska komora Srbije
Serbia	Savez farmaceutskih udruženja Srbije
Slovakia	Slovenská Lekárnická Komora
Slovenia	Lekarniška Zbornica Slovenije
Spain	Consejo General de Colegios Oficiales de Farmaceuticos España
Sweden	Sveriges Apoteksforening
Turkey	Türk Eczacıları Birliği
United Kingdom	National Pharmacy Association
United Kingdom	Pharmaceutical Society of Northern Ireland
United Kingdom	Royal Pharmaceutical Society

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Finally, ISBE would like to thank Mr. Duarte Santos, PharmD, President PGEU 2020 for challenging us to present a proposal for leading this research and, not least, for the confidence expressed in the Research Team & Expert Panel.

## EXECUTIVE SUMMARY

### **Brief Background**

The aim of this research was to evaluate and synthesize state-of-the-art evidence, current practice, and trends in community pharmacy-based services in Europe.

This research is, to our best knowledge, the first using a comprehensive mixed methods approach combining mapping of current practices of pharmacy services including interventions on COVID-19 in 32 countries in Europe with review of published evidence, hence providing a near accurate portrayal of current practices, trends, and evidence of pharmacy services in Europe.

Medication supply is the most important role of community pharmacies as it ensures safe, timely and equitable access to medicines through a trusted and reliable network and high skilled pharmacists subject to regulations, ethics, and standards of practice in all countries around the globe.

Community pharmacists have been pursuing additional complementary roles over the last 50 years. Several policy papers have also acknowledged the need to expand the role of community pharmacists to support healthcare systems.

Pharmacy-based public health interventions can be defined as complex health interventions, in health promotion, disease prevention, and disease/medication management.

In the context of limited and scarce resources, it may be relevant to invest in public health interventions that make use of the walk-in access to pharmacies, equitable geographical distribution, high frequency of patient interactions, patients' trust, long opening hours, and high skilled pharmacist workforce. This is in the context that they contribute to optimize compliance, safety, and effectiveness of medicines and improve health outcomes at acceptable costs.

## Pharmacy Services in Europe

### Country mapping

We mapped 38 pharmacy services beyond the medication supply role and organized them under categories adapted from the Kaiser pyramid care model:

- Dispensing related services to promote access to medicines.
- Health promotion and disease prevention services.
- Screening and referral services.
- Disease management services.
- Individual case management services.

This enabled to interpret findings on pharmacy services in terms of stratified population health management.

This was the basis for the ISBE Pharmacy Services Survey conducted in 32 countries in Europe in September 2020 (country mapping).

The most frequent pharmacy services provided in 18-27 countries in most pharmacies under contract, agreement, legislation, or regulation were mostly related to dispensing as this is the core role of pharmacies. Some of these services were reimbursed by the government or the health care payer outside the standard pharmacy dispensing remuneration. These services reflect priorities given to efficiency (generic substitution), safety (pharmacovigilance), individualized therapy (galenic formulation), and access to medicines during out-of-hours (night services). Most used and reimbursed services in most countries also reflect prioritization related to access to medication (repeat dispensing and dispensing and management of high-cost therapy normally supplied to patients by hospitals).

The second tier of most frequent pharmacy services provided in 10-12 countries under a regulatory framework acknowledges the role of pharmacies in ensuring safety (emergency supply, urgent supply, refusal to dispense for safety reasons). The second tier also includes a non dispensing related service which is medication review. This service is reimbursed in 7 countries.

The third tier embraces a wide spectrum of services provided and reimbursed outside the standard dispensing remuneration in 5-8 countries. This goes beyond the dispensing role, acknowledging the role of pharmacies in adherence (dose administration aid, instruction on the use of devices, supervised consumption of medicines, first time dispensing intervention, therapeutic adherence support), integrated care pathways with primary care, and includes health promotion activities such as pharmacist-delivered vaccination and needle/syringe exchange.

The fourth tier of services provided within a regulatory framework in 2-4 countries includes newer roles for pharmacies in health promotion, screening, and disease management, such as smoking cessation, chronic disease management, therapeutic substitution, teleconsultations by pharmacists, common/minor ailment management, screening at-risk individuals, home or nursing home medication review, medication reconciliation, and weight management. Smoking cessation, chronic disease management, common/minor ailment management, home or nursing home medication review and weight management are already reimbursed by the government or health care payer outside the standard pharmacy dispensing remuneration in at least one country.

In summary, the country mapping portrays numerous and diverse pharmacy services currently provided in Europe far beyond the dispensing roles and some services are already reimbursed in some countries. This acknowledges the roles of pharmacies in health promotion, screening, disease, and in case management.

### **Review of evidence**

We reviewed the evidence on pharmacy services published between 2013 and August 2020 and used a 3-level hierarchy of evidence comprising: overviews (or umbrella reviews) of systematic reviews; systematic reviews of primary studies; primary studies included in systematic reviews.

This review captured more than 25 health conditions stemming from 4 overviews (covering 111 systematic reviews) and 38 systematic reviews (comprising 149 primary studies).

Three overviews were on effectiveness and one addressed economic evaluation. Although overviews are quite different between one another and have different objectives, a positive trend for disease management, screening and referral, and smoking cessation emerging from results seems very consistent.

Primary studies covered in these 38 systematic reviews are originated in 15 European countries, of which 7 developed 90% of studies.

Primary studies comprise 149 studies of which 85 studies addressed effectiveness or impact on patients and 64 addressed economic evaluations.

There is substantial evidence on pharmacy services covered in these systematic reviews. However, this is not without methodological challenges. This is typical of complex health interventions which operate at different levels (health systems, pharmacy settings, pharmacists, and patients) but there is room for improvement.

Positive evidence of pharmacy services stemming from systematic reviews is fairly well established for screening and referral services (e.g. cardiovascular risk, diabetes, asthma and chronic obstructive pulmonary disease, depression, osteoporosis, cancer), chronic disease management (e.g. cardiovascular risk, hypertension, diabetes, lipid, asthma), medication review or medication management, smoking cessation, and therapeutic adherence support.

Some studies present mixed results which may be due to poor study designs; broader scope of population, intervention, and diverse outcomes; some interventions are poorly defined or presenting implementation issues, especially in standardization.

The findings of this overview are consistent with reported results and issues described in the other overviews of systematic reviews. In addition, these other overviews have also showed positive evidence for pharmacist-delivered flu vaccination and for pharmacists' delivered needle exchange services.

## **Pharmacy Interventions on COVID-19 in Europe**

### **Country mapping**

We mapped 30 pharmacy interventions on COVID-19 and further organized them under categories which correspond to the steps in response to public health emergencies. This was built on the work of previous authors:

- Prevention: measures to reduce health risks of COVID-19 pandemic.
- Preparedness: measures to ensure timely and effectively responses from the health care system.
- Response: immediate actions in response to COVID-19 pandemic.
- Recovery: measures to return to “normal” activities post-pandemic.

This enabled to interpret findings on pharmacy interventions on COVID-19 in terms of stages used in response to public health emergencies.

This was the basis for the ISBE Pharmacy Interventions on COVID-19 Survey conducted in 32 countries in Europe in September 2020 (country mapping).

The European country reports portray a wide array of pharmacy interventions on COVID-19 implemented in most pharmacies. This was done in several countries within a very short time frame and reflects the highly reactive and adaptive character of pharmacies in response to the pandemic outbreak.

All 30 mapped pharmacy interventions and measures on COVID-19 have been provided throughout Europe although some more extensively than the others.

Almost all preventive measures to reduce health risks of COVID-19 (patient information, protocols for disinfection of surfaces, use of disposable masks, floor marking, and barrier at counters) have been the most frequent interventions provided in most pharmacies in almost every country. Conversely, the use of Personal Protective Equipment (PPE) by staff, restricted opening hours, and temporary suspension of patient care services were not applied in most countries with a few exceptions. This is coherent with possible difficulties in accessing PPE,

extended operations in response to stockpiling and may reflect, to a certain degree, a shift of some primary care patient care services to pharmacies.

The most frequent reported measures to ensure timely and effective responses from the healthcare system included stock and supply of medicines, as well as hand sanitizers and masks. This reflected the pharmacies preparedness for stockpiling and increased demand for services and products.

It is also interesting to note that most frequent immediate actions in response to pandemic include symptom-based referral pathways for suspected cases, increased demand to home delivery of medicines, pharmacy telephone support to vulnerable patients during isolation and dealing with the new vulnerable patients.

Expanded powers for 17 interventions on COVID-19 granted to pharmacies in 16 countries and legislation passed in view of COVID-19 for 23 interventions in 20 countries allowed pharmacies to provide services including improved access to medication and relevant products, patient screening and referral, and support to vulnerable patients.

Emergency temporary closures of pharmacies had occurred in at least 12 countries at the time of reply (September 2020).

### **Review of evidence**

Research on pharmacy interventions on COVID-19 is still in its infancy stage.

We reviewed primary studies published until August 2020 and found 7 studies conducted in 4 countries in Europe.

They confirm the wide array of interventions that were put in place within a short time and the expanded powers granted to pharmacies to combat COVID-19.

Three papers reported difficulties experienced by pharmacies: failure to obtain PPE from the health services to pharmacy staff; price increases by the wholesalers and suppliers; frequent inspections from authorities; extended working hours; dealing with angry patients; financial loss in the pharmacy; reimbursement delays to pharmacies; and staff mental health issues.

It is likely that the research on pharmacy interventions on COVID-19 has expanded since August and will continue to expand in the coming months.

Pharmacy associations played an important role to pharmacists by developing and updating guidance and emergency plans to assist community pharmacists.

## **Brief final remarks**

These findings are aligned with recommendations described in policy papers and in other overviews of pursuing expanded roles and adequate remuneration of pharmacy services.

Limitations of our review include variations in pharmacy-based services under different health systems, different pharmacies, different pharmacists within the same pharmacy, and real-world patients; limitations of overview methodology; heterogeneity in populations, interventions, and outcomes; conflicting evidence and missing data. Also, no grey literature was included due to time constraints.

Pharmacies have been able to implement a wide array of interventions on COVID-19, some of them beyond dispensing and which may have contributed to alleviate the burden on other health care services and provide valuable support to patients. Expanded powers granted and legislation passed acknowledge that contribution. This could be extended to other countries. This could also pave the way to explore further roles in vaccine administration, point-of-care antigen-based test screening and referral, as well as referral pathways for antibody testing and immunity assessment.

Lessons learned from pharmacies' involvement in response to this pandemic crisis should also raise questions on the relevance of involving this network of health care providers in future country preparedness plans for public health emergencies.

We hope these findings may assist in improving the design, implementation, and research on pharmacy services, and in raising relevant policy questions. This could also drive value-based health care promoting the best use of community pharmacies.