

Development of self-care in Spanish community pharmacies

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ABSTRACT

Spain is a European country with over 47.5 million inhabitants and a public National Health System model (i.e., SNS or “*Sistema Nacional de Salud*”) that provides universal coverage to residents and non-residents. The system is funded primarily by general taxes, and it is managed by the 17 regions that have responsibility for the provision and management of healthcare services in their respective territories. The health system recognizes self-care as an important element where individuals have an important role to play in maintaining their own health and preventing illness. In addition, there are non-governmental organizations that promote self-care and provide resources and support to individuals and health professionals.

Over 55 thousand pharmacists work in 22,198 community pharmacies distributed throughout the Spanish territory. Pharmacies are the only setting that provide non-prescription medications, which is one of the most used tools for self-care. In addition, they provide a range of Primary Care services to improve patient outcomes and the efficiency of the SNS. This paper includes a description and a classification of the community pharmacy services following the seven pillars of self-care established by the International Self-Care Foundation:

- Related to pillars 1 to 4 and 6, Spanish community pharmacists provide health promotion, health education, health information and nutritional assessment.
- In relation to pillar 5, the services offered are HIV and syphilis screening, colorectal and cervix cancer screening, SARS-CoV-2 screening test and communication, diabetes, high blood pressure and hypercholesterolemia screening. Regarding the programs for avoiding/stopping drug use: methadone supply, syringe exchange and smoking cessation. Another important service is immunization. Spanish community pharmacists are not legally allowed to vaccinate; however, they contribute through education, or vaccines supply, among others.
- For the pillar 7, community pharmacists provide services such as a minor ailment service, an adherence service or a network to actively monitor medication safety (sentinel pharmacies).
- Many of the pharmacy services related to self-care have been defined and classified at a national level; however, not all community pharmacies provide them while only some services are funded by the regional health systems.

1. Introduction

Spain is a country with 17 regions that have decentralized powers and are responsible for health matters. Its population is over 47.5 million people with an increase of 0.6% between the 2021 and 2022. The distribution of age in July 2022 was: 18.1% of the population aged between 0 and 18 years old, 62.8% between 19 and 65 years and 19.1%

over 65 years old.¹ The majority of the population (84.1%) live in urban areas, which account for the 16.0% of the Spanish territory.²

Public healthcare expenditure in Spain accounts for 73.5% of the total health expenditure, reaching 90,300 million EUR (data 05.2023) and representing 8.0% of its Gross Domestic Product (GPD). Health care expenditure per capita in 2018 was 1907 EUR³ which was below the OECD mean.⁴ The health care cost designated to hospitals and specialists

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was 64.0% of the total budget compared to the 14.0% for primary care⁵; this last percentage decreased during the year 2008.⁶ Primary care settings address approximately 430 million consultations per year, with almost 59 million emergencies in their 13,000 health centers throughout the country.⁶ Over 14.0% (12.8 million EUR) of the health expenditure is used to cover prescription medications' costs dispensed in community pharmacies.³

The public National Health System (SNS or “*Sistema Nacional de Salud*”) is a decentralized system that provides universal coverage to residents and non-residents. The system is funded primarily by general taxes. It is managed by the 17 regions that have responsibility for the provision and management of healthcare services in their respective territories. Health care is provided through a network of hospitals and primary care health centers offering a broad portfolio of services with no co-payments, except for medicines.

The Interstate Council (“*Consejo Interterritorial*”) is composed since 2003 by the Ministry of Health and the health boards from the 17 regions.⁷ It aims to facilitate communication between the different regions and the national government and to ensure the quality and cohesion of the SNS, guaranteeing citizens' rights in the whole country. Despite the decentralized model, at a national level there is a Portfolio of Common Health Services (“*Cartera de servicios comunes del Sistema Nacional de Salud*”) which contains the basic and complementary services necessary to guarantee appropriate and continuity of care to all users of the SNS (basic services are fully covered by the national government while complementary are only partially or not covered by the SNS), regardless of the level of care.⁸ Therefore, it includes services for public health, primary care, special care, emergency, pharmacy, ortho-prosthesis, dietary and health care transport.

The Spanish healthcare system recognizes self-care as an important element where individuals have an important role to play in maintaining their own health and preventing illness. The concept of self-care was included for the first time in a legal text in the Law 29/2006 which highlighted that “*It is also important to include the concept of self-care in relation [...] to non-prescription medications. It is a matter of adapting the wording of the Law to the social reality of the 21st century, where the use of non-prescription medications becomes more important under the conditions established, but which must be carried out in the framework of a rational use of medications, for which the role of the pharmacist is essential in all matters relating to responsible self-medication*”.⁹ The Spanish Ministry of Health aims to broaden self-care programs for population and carers as one of the objectives of the Strategic Framework for Primary and Community Care⁶ developed in 2019. The government is working to promote self-care as an integral part of the healthcare system and to provide resources and support to individuals to help them take an active role in their own health and wellbeing. The two strategies proposed are: 1. creating expert teams in all healthcare areas to recruit expert caregivers and patients for supporting activities in the community, and 2. prioritizing the recruitment of those with the greatest need for support in order to develop self-care interventions.

In addition, there are non-governmental organizations in Spain that promote self-care and provide resources and support to individuals and health professionals. The Self-care Association (ANEFP “*Asociación para el Autocuidado de la Salud*”) brings together and represents the companies that manufacture or distribute different self-care products in the Spanish territory, among which the most important are medications available without prescription and not included in the financed pharmaceutical provision of the SNS.¹⁰ ANEFP is an association of the companies that provide services to the self-care pharmaceutical industry. It is a member of the European Association of the Self-Care Industry, which in turn belongs to the Global Self-care Federation, a non-governmental member of the World Health Organization (WHO). One of the activities of ANEFP is to evaluate the advertisements concerning self-care products targeted at the general public to assess if they comply with the legislation.¹⁰ From 2013, advertisements of non-prescription medications are exempted by law of being assessed by the Ministry of Health

or at regional level.¹¹ All non-prescription medications advertised publicly must show an image saying that patients “*Must read the instructions and consult a pharmacist*”. In Spain, non-prescription medications, which are one of the most used tools for self-care, can be only bought in community pharmacies.

2. Community pharmacies and pharmacists

At the end of 2021, there were 78,128 registered pharmacists, which represents 8.6% of the total health care professionals among in Spain.¹²

To become a licensed pharmacist, 5 years of university studies (Master of Pharmacy or MECES Level 3) must be completed. During the last year, students must carry out six months of supervised placements in a community pharmacy (82.1%, which represents approximately 2300 students yearly) or a hospital pharmacy (17.9%, approximately 500 students yearly).¹³ Most pharmacists (71.1%, $n = 55,543$) work in community pharmacy settings. There are 22,198 community pharmacies distributed throughout the Spanish territory (35.5% in province capital cities).¹² A community pharmacy is officially defined as “*the public health establishment, authorized and supervised by the competent health authority, whose primary function is to provide pharmaceutical care to the population, dispensing and selling medication and other health products, as well as promoting health education and prevention activities*”.⁹ Community pharmacies are therefore “*private health care establishments of public interest*”, subject to the health planning established by each of the 17 regions. This definition was established by the Law 29/2006 with objective of guaranteeing the rational use of medications and healthcare products.⁹

Community pharmacy owners must be licensed pharmacists and each pharmacist-owner may own a maximum of one pharmacy. Nearly half of pharmacists working in community pharmacy are owners, 44.9% ($n = 24,947$). Most of the pharmacies are owned by one pharmacist only, 86.7% ($n = 19,238$).¹² The mean number of working pharmacists per pharmacy is 2.5 and the mean number of habitants per community pharmacy is 2135.¹² In fact, Spain is one of the countries with the highest number of pharmacies per habitants.¹³

To practice in community pharmacy, in addition to the University degree, it is also mandatory to be registered in the pharmacy association of the province where the pharmacy is located. Each pharmacy association is part of the General Pharmaceutical Council of Spain (CGCOF or “*Consejo General de Colegios Oficiales de Farmacéuticos*”), that acts as the key organization to deal with the Spanish Government at a national level. The CGCOF is more important for dealing with the government than the industrial association (FEFE or “*Federación Empresarial de Farmacéuticos Españoles*” that represents pharmacy owners). To practice in community pharmacy in Spain, no mandatory post graduate education or Continuing Professional Development (CPD) is required. However, the CGCOF has established requirements, evaluation criteria and certification process and some provinces have adopted the process.¹⁴

Other organizations such as the Spanish Society of Clinical, Family and Community Pharmacy (SEFAC or “*Sociedad Española de Farmacia Clínica, Familiar y Comunitaria*”) offer CPD and promote research in community pharmacy. Regarding self-care, SEFAC has developed tools such as documents for patients¹⁵ or training for pharmacists¹⁶ in agreement with other associations.

The Framework for Primary and Community Care established by the government in 2019⁶ encourages collaboration between Primary Care and other agents such as community pharmacists. However, community pharmacists are not considered part of the Primary Care health force.

The price of all medications (prescription and non-prescription) is set by the National Government. Prescription medications are covered partially by the SNS with a co-payment from the patient of 40%, 10% or 0% depending on the patient's employment situation. Non-prescription medications are not covered by the SNS and therefore, fully covered by the patient. Only dispensing prescription medications and recommending non-prescription medications are included and defined in the

Portfolio of Common Health Services as pharmacy services.⁸

3. Community pharmacy services

In 2001, the Ministry of Health established the “Consensus for Pharmaceutical Care”.¹⁷ The statement defines the term “Pharmaceutical Care” and describes three main groups of clinical activities related to the patient (not only to the medication) carried out by community pharmacists. The first group includes medication dispensing and compounding, the second group is related to patient consultation (consultation regarding minor ailments and recommendation of non-prescription medications), medicines education, health education and pharmacovigilance, and the third group refers to comprehensive medication reviews. The definitions, objectives, requirements and evaluation methods were defined for the three main services (medication dispensing, patient consultation and comprehensive medication review).

In 2004, the Pharmaceutical Care Forum was developed with the support of the Ministry of Health and, later on in 2009, the Pharmaceutical Care Forum in Community Pharmacy was set up (Foro AF-FC, “*Foro de Atención Farmacéutica en Farmacia Comunitaria*”).¹ Foro AF-FC made a classification of the professional pharmacy services at a national level. This classification was ultimately updated in 2022 (Fig. 1)¹⁸ and it divides the services in two main categories (pharmaceutical care or community health related). The category of services aimed at the community includes health promotion, health information and education, disease prevention through disease screening, immunization programs, smoking cessation, nutritional assessment or point of care testing (glucose, cholesterol, blood pressure, etc.). While the pharmacy care services include a minor ailment service or an adherence management service. These services aim at improving patients' self-care and self-management by increasing patients' education about self-care. However, not all of them are provided in every community pharmacy and, in most cases, they are not covered by the SNS nor the regional health systems, they are only paid by patients. In addition, each of the 17 regions have a different pharmacy services portfolio.

In addition, Foro AF-FC has recently established the necessary pharmacist competencies for 19 different community pharmacy services.¹⁹ The competencies are also divided into four categories: analytical (25.8%), collaborative (22.6%), executive (25.8%) and related to management (25.8%). Both in the classification of services or the list of competencies, there is a lack of inclusion of the specific term “self-care” as recommended by the Global Self-care Federation.²⁰ Nevertheless, some of the competencies included to provide some clinical services are related to self-care such as planning disease prevention strategies, planning population strategies, assessing patient information and/or health outcomes or prescribing treatment.¹⁹

4. Community pharmacy services related to self-care in Spain

The International Self-Care Foundation has developed a framework for self-care, structured according to seven pillars or domains. For the purpose of this paper, the services offered in Spanish community pharmacies have been classified following the aforementioned framework²¹ (Table 1):

4.1. Pillars 1 to 4 and 6: knowledge and health literacy, mental wellbeing, physical activity, healthy eating and good hygiene

The World Health Organization refers to health literacy by the ability

¹ Pharmaceutical Care Forum in Community Pharmacy (Foro AF-FC) is composed by the CGCOF, SEFAC, the Pharmaceutical Care Spain Foundation, Research Group in Pharmaceutical Care of the University of Granada, National Conference of Deans.

of individuals to “gain access to, understand and use information in ways which promote and maintain good health”.²² Community pharmacists contribute to patients' knowledge and health literacy about mental wellbeing, physical activity, healthy eating and good hygiene. Pharmacists can educate patients on how to manage their health conditions, provide information on healthy lifestyle choices, and teach patients how to monitor their own health. They also promote health and wellness by providing patients with advice on healthy living and lifestyle choices. Pharmacists can recommend dietary changes, exercise programs, and other lifestyle modifications that can help patients stay healthy and prevent disease. This type of patient education can help reduce the risk of disease complications and improve patient outcomes through the following professional services:

- Health promotion
- Health education
- Health information
- Nutritional assessment

These services have been classified by Foro AF-FC and the pharmacist's competencies for each one of them established.

They are normally provided while offering other services such as the minor ailment service or comprehensive medication review through patient's education and advice. The only related service that is provided and is remunerated by the health system locally in Catalonia from 2019 is the health education program for appropriate use of medications.²³ This service has offered 147 sessions for 2096 people attending community pharmacies since 2006.

Many different health campaigns are promoted nationally from the CGCOF or locally from different pharmacy associations. An example, the campaign about good hygiene “Hygiene in your hands” in Andalucía from 2019, the campaign for mental wellbeing “Tell me” in Andalucía between 2019 and 2021 or the campaign for preventing childhood obesity in Castilla la Mancha in 2018.²³

4.2. Pillar 5: risk avoidance or mitigation

Pillar 5 of self-care includes avoidance or reduction of behaviors involving substances such as tobacco or alcohol; or practices such high-risk sexual behavior or high sun exposure; and disease prevention such as immunization.

Foro AF-FC has already classified services such as immunization, syringe exchange programs and smoking cessation. Examples of these are:

HIV screening: since 2009 community pharmacies in País Vasco and subsequently in other regions (Cataluña, Baleares, Cantabria, Castilla y León and Asturias) offer HIV tests covered by the regional health system with a co-payment from patients. In País Vasco, syphilis screening is also offered with the HIV screening (60 community pharmacies made 245 tests in 2021) and it is paid by the regional health system with a co-payment from the patient.

- Colorectal cancer screening: provided in regions such as Cataluña, Baleares or Navarra. In Murcia, for example, community pharmacists provide patients with a kit, offer information to patients and document the activity for the regional health system (60,013 citizens obtained a kit in 2021). Community pharmacies are not remunerated for offering this service, with the exception of pharmacies from Cataluña.
- Cervix cancer screening: in Cataluña since 2021, over one thousand kits were provided finding 10 patients who were positive.
- SARS-CoV-2 screening test, communication to the Ministry of Health and supply of certificates for patients. Covered by the regional health system in Aragon, Comunidad Valenciana, Galicia and Murcia. In Aragon, 42,636 tests have been carried out in community pharmacy with a positive rate of 9.0% from August 2021 to July 2022.

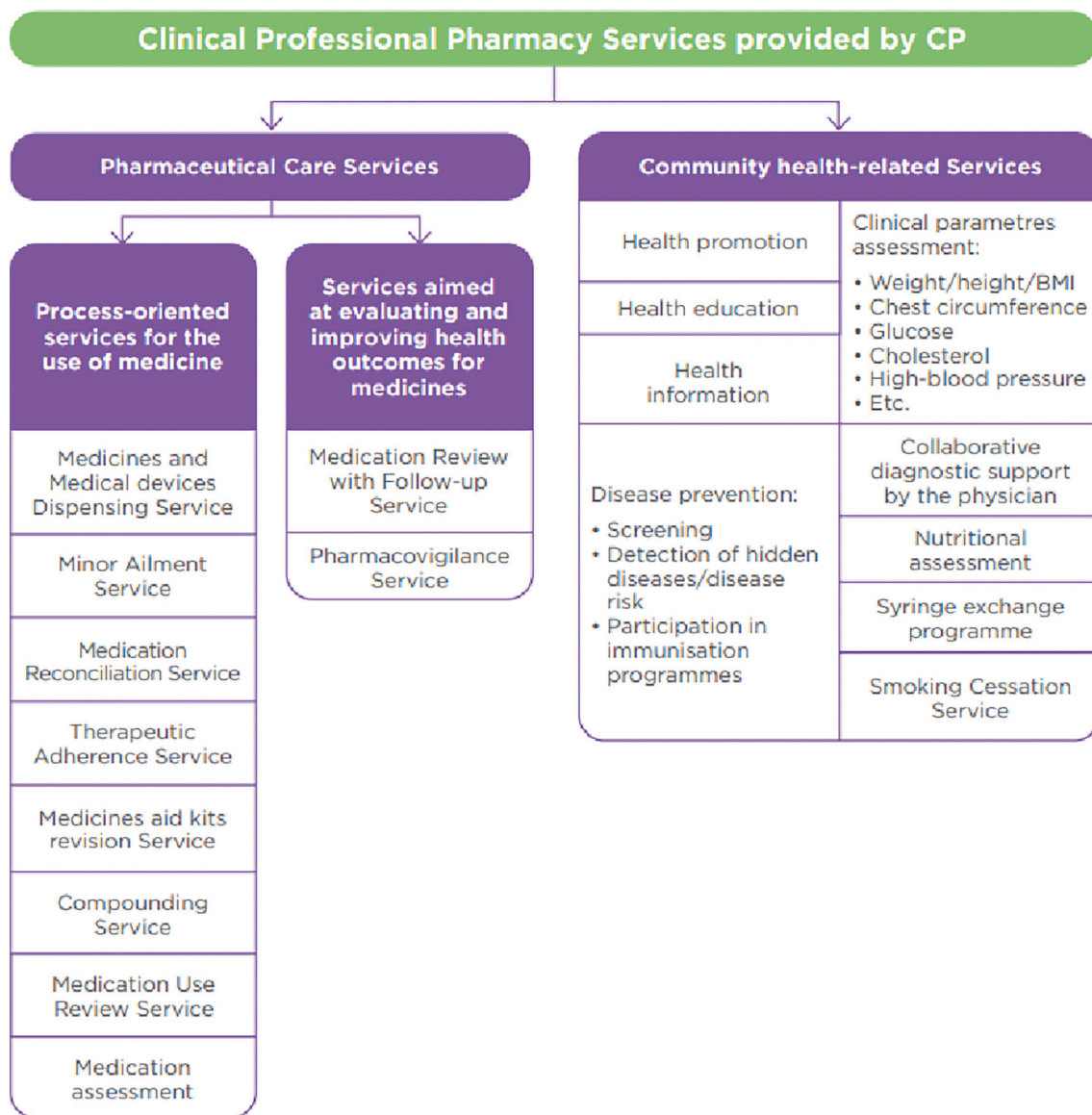


Fig. 1. Classification of community pharmacy services.¹⁸
 *This classification does not exclude other CPPS that may be considered.

- Point of care testing for diabetes and hypercholesterolemia: most pharmacies perform tests for the measurement of glucose, glycosylated hemoglobin or cholesterol to help general practitioners diagnosing patients and to improve their follow up. Generally, patients pay for these services.
- Point of care testing for high blood pressure: every community pharmacy in Spain offers blood pressure measurements that is paid by patients. In addition, some pharmacists are trained to provide a 24-h ambulatory blood pressure monitoring. SEFAC provides community pharmacists with a training for the different types of measurements (274 pharmacists registered for the training in 2020 and 2021 with a total of 817 patients)²⁴; and the pharmacy association from Andalucía also offers training (MAPAfarma®).²⁵ Within the MAPAfarma® program, a cross-sectional study carried out with 1170 patients in 167 community pharmacies from Andalucía showed 60.4% sensibility and 79.8% specificity for the community pharmacy blood pressure measurement compared to the gold standard 24-h ambulatory blood pressure measurement.²⁶

- Methadone supply (provided by 11 of the 17 Spanish regions): the service is covered by the regional health system in Aragon, Asturias, Canarias, Castilla la Mancha, Cataluña, Extremadura, Galicia, Baleares, Murcia, Navarra and País Vasco.
- Syringe exchange program for parenteral drug users: covered by the regional health system in Navarra (55 pharmacies originally included in the program although only two of them remain active) and País Vasco (28,568 kits distributed in 2021).
- Smoking cessation program: community pharmacies in eight different Spanish regions (e.g., Canarias, Castilla y León, País Vasco) participate in programs for the identification of patients willing to stop smoking, to carry out patients' interventions such as follow up of patients with a nicotine replacement therapy, to contribute to smoke prevention by offering information to high school students (e.g., Extremadura) or to participate in programs for the evaluation of the smoke free law (e.g., program RASSELH in Andalucía).²⁷ In addition, SEFAC has developed a one-year postgraduate training to help pharmacists offering a smoking cessation service (689 pharmacists from the whole country has already completed the training),²⁸ and a research study that included control non randomized study that

Regarding programs for avoiding/stopping drug use²³:

Table 1
Classification of pharmacy services related to self-care.

Seven pillars of self-care	Pharmacy services	Characteristics (Foro AF-FC)			Funding	
		Classification	Objectives & Process	Competencies defined	By SNS locally	
Knowledge & Health literacy (1); Mental wellbeing (2); Physical activity (3); Healthy eating (4); Good Hygiene (6)	Health promotion	✓*	X	✓	X	
	Health education	✓*	X	✓	✓	
	Health information	✓*	X	✓	X	
	Nutritional assessment	✓*	X	✓	X	
Risk avoidance (5)	Screening	HIV	✓*	X	X	✓
		Syphilis	✓*	X	X	X
		Colorectal cancer	✓*	X	X	X
		Cervix cancer	✓*	X	X	X
		SARS-CoV-2	✓*	X	X	✓
		Diabetes/ Hypercholesterolemia	✓*	X	✓	X
		High blood pressure	✓*	X	✓	X
		Drug avoidance	Methodone supply	X	X	X
	Immunization	Syringe exchange	✓*	X	✓	✓
		Smoking cessation	✓*	X	✓	X
		Administration (pharmacist to pharmacist)	✓*	X	X	X
		Education campaign	✓*	X	X	X
Rational use of products and services (7)	Procurement/supply	✓*	X	X	X	
	Minor ailment service	✓†	✓	✓	X	
	Adherence service	✓†	✓	✓	✓‡§	
	Sentinel pharmacies	✓†	X	✓	X	

* Service classified as community health-related or public health service.¹⁸

† Services classified as pharmaceutical care service.¹⁸

‡ The tool (monitored dosage systems).

§ Funded by pharmaceutical companies.

included 182 community pharmacies (102 intervention pharmacies who previously followed training and 80 control pharmacies who offered usual care) and 1078 people willing to stop smoking who were followed for 12 months (800 in the intervention group and 278 in the control group).²⁹

Another important service related to Pillar 5 is immunization. Currently, Spanish community pharmacists are not legally allowed to vaccinate patients; however, able to perform²³:

- Vaccination by community pharmacists to all pharmacy staff against COVID-19 in 2021 in Madrid (11,400 vaccines provided).
- Public health campaigns covered by regional health systems encouraged the vaccination of health care professionals.
- Education campaigns for patients about flu vaccinations (Canarias, Castilla la Mancha, Castilla y León, Cataluña, Galicia). In Castilla y León, a survey was carried out with over 700 thousand citizens during the season 2021/2022 to evaluate whether risky patients were vaccinated, reasons for choosing not to vaccinate and adverse events.
- Procurement, custody, storage and supply of vaccines are also undertaken in community pharmacies.³⁰

4.3. Pillar 7: rational use of products and services

Self-care products and services are the ‘tools’ of self-care and community pharmacists are ideally placed to provide them:

- The minor ailment service, defined by Foro AF-FC at a national level, allows patients to select the appropriate pharmacological and non-pharmacological treatment for a minor ailment or to evaluate self-medication in those cases where the patient chooses the medication him/herself. The service is not remunerated by the SNS; however, benefit is obtained through the profit margin of the medication/product provided. Medications are paid fully by the patient; therefore, for those consultations resulting in non-pharmacological advice or triage, the service is not remunerated.

Protocols have been agreed between community pharmacists and general practitioners for the management of minor ailments,³¹ evaluation of the service impact have been made with positive results^{32,33} and machine learning algorithms have been developed to assist pharmacists when triaging patients with minor ailments.³⁴

- The adherence management service is also defined by Foro AF-FC. This service improves patients' ability to optimize medication management. A Spanish study showed the effectiveness of the service for improving medication adherence, clinical outcomes³⁵ and quality of life³⁶ for patients suffering hypertension, asthma and chronic obstructive pulmonary disease. The service is not remunerated by the SNS nor any regional health system; however, a tool for improving adherence (dose administration aids) is remunerated locally in Galicia for patients over 74 years old with over 13 different medications who live alone.³⁷ Other regions such as País Vasco³⁸ or Castilla y León, also remunerate the tool.
- Sentinel pharmacies²³: six Spanish regions (Asturias, Castilla la Mancha, Castilla y León, Cataluña, Madrid and Navarra) have networks to actively monitor medication safety through the detection, reporting and prevention of medication related problems (adverse events, medication errors, etc.). Therefore, it contributes to self-care by increasing rational use of medicines which is defined by WHO as where “patients receive medications appropriate to their clinical needs, in doses that meet their own individual requirements, for an adequate period of time, and at the lowest cost to them and their community”.

5. Conclusion

In Spain, the landscape of pharmacy services pertaining to self-care have been defined and classified at a national level. Despite this, not all pharmacies have integrated these services into their day-to-day practices with only a few services remunerated by the regional health system. The potential role of community pharmacists in Primary Care, particularly in providing support for patients' self-care, is an aspect that warrants official recognition and acknowledgment. This is underscored by the number and distribution of community pharmacies across Spain,

making them a readily accessible point of care for a vast portion of the population.

As Spain comprises 17 distinct regions, it becomes crucial to consider the need for homogenization and standardization of self-care services across these regions. Ensuring a consistent level of service and access to self-care resources across the country can enhance the overall healthcare experience for patients and promote a more equitable distribution of healthcare services. Recognizing the potential of community pharmacists in Primary Care and advocating for their official involvement in patients' self-care is essential, given the extensive presence of community pharmacies in Spain and the competencies of community pharmacists, as healthcare professionals.

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Declaration of Competing Interest

Declarations of interest: none.

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