

International Series: Integration of community pharmacy in primary health care

Primary health care policy and vision for community pharmacy and pharmacists in Portugal

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Abstract

The central role of the Portuguese National Health Service (P-NHS) guarantees virtually free universal coverage. Key policy papers, such as the National Health Plan and the National Plan for Patient Safety have implications for pharmacists, including an engagement in medicines reconciliation. These primary health care reform, while not explicitly contemplating a role for pharmacists, offer opportunities for the involvement of primary care pharmacists in medicines management. Primary care pharmacists, who as employees of the P-NHS work closely with an interdisciplinary team, have launched a pilot service to manage polypharmacy in people living with multimorbidities, involving potential referral to community pharmacy. Full integration of community pharmacy into primary health care is challenging due to their nature as private providers, which implies the need for the recognition that public and private health sectors are mutually complementary and may maximize universal health coverage. The scope of practice of community pharmacies has been shifting to service provision, currently supported by law and in some cases, including the needle and syringe exchange program and generic substitution, remunerated. Key changes envisaged for the future of pharmacists and their integration in primary care comprise the development and establishment of clinical pharmacy as a specialization area, peer clinician recognition and better integration in primary care teams, including full access to clinical records. These key changes would enable pharmacists to apply their competence in medicines optimization for improved patient outcomes.

Keywords

Pharmacies; Primary Health Care; Delivery of Health Care, Integrated; Ambulatory Care; Community Health Services; Pharmacists; Community Pharmacy Services; Professional Practice; Portugal

HEALTH CARE IN THE PORTUGUESE CONTEXT

Portugal has a population of around 10.5 million inhabitants, which is mal distributed with a high coastal urbanized population density and low in rural areas.¹ Data for 2017 indicate that Portugal is in the group of countries with highest ageing indexes, together with Japan, Germany and Italy.² In 2017 the elderly were 17% of the population. Estimates for 2050 suggest that 35% of the population will be aged over 65 and 13.4% aged over 80.³ In line with the demography, the patterns of disease are those of industrialized countries, with most adults having two or more chronic illnesses.⁴ When compared to the OECD average, Portugal has higher prevalence of diabetes and dementia, and conversely a higher survival for breast cancer.⁵

The gross domestic product (GDP) per capita for 2018 was 34,272 USD, with slight increases in the last 20 years, albeit with some exceptions during recession years.^{5,6} The Portuguese health care system is well structured, as a result of the creation of a Portuguese National Health Service (P-NHS) in 1979, offering universal health coverage. The P-NHS follows a Beveridge model, where health care is funded by the government through tax payment.⁷

In 2019 the Government's expenditure on health was 6% of the GDP with an out-of-pocket expenditure by citizens estimated at 3.1% of GDP.⁵ In 2020, around a third of Portuguese citizens have private health insurance, not because of ineligibility for P-NHS care, but mostly because of a perception of low quality of the public system or delays in access to specific treatments (e.g. surgery).⁸ The health care workforce has been increasing, with 5.2 physicians, 7.2 nurses and 1.3 pharmacists per 1,000 inhabitants in 2018.⁹

GENERAL HEALTH POLICY IN PORTUGAL

The dominant feature of the health program presented by the Government for the period 2019-2023 lies in the introduction of new forms of services provision and organizational structures with objective to better respond to societal needs and improve the efficiency and quality of care.^{10,11} These forms of delivery intend to promote innovation and disruption of traditional approaches, improving access to health services, whilst maximizing integration of local responses between different levels of care to achieve continuity of care.¹⁰ Public participation emerges as a fundamental axis of the P-NHS reform, aligning its services with citizens' expectations and needs, both in hospitals and in primary health care. Special emphasis is given to activities and services that may contribute to promote healthy ageing. These comprise alternative ways of service provision, resorting to digital technologies, creating IT systems for data management and data consolidation. Finally, the Government program also addresses current challenges in achieving universal health coverage without the risk of financial hardship, by reinforcing the Government's responsibility of ensuring health for all and subjecting third party contracting for P-NHS services to a needs and capacity assessment.¹⁰

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The main strategic lines of the national health policy reported by the Portuguese General Health Directorate are brought together in the "National Health Plan", based on four strategic axes:

1. Public participation in health, reinforcing the citizen's power and responsibility towards individual and collective health;
2. Equity and adequate access to health care;
3. Health quality, where emphasis is given to person-centered care and value-based outcomes;
4. Health in all policies.¹²

The National Health Plan sets specific goals to be met in 2020, some of which highlight the role of patient health-related behaviors in achieving optimal health outcomes (e.g. to reduce the prevalence of smoking behaviors in population aged over 70); and identifies challenges that must be overcome to meet the set targets. None of the goals are specifically directed to pharmacists, although several challenges are specifically relevant for primary care, and by implication for pharmacists and pharmacies. One of the strategies refers to providing person-centered care instead of disease-focused care; the latter resulted in fragmented care arising from uncoordinated specialists treating multimorbidity. Worth noting is the challenge of information technologies for timely and coordinated access to clinical data for all professionals, so that patient safety is guaranteed.

Another key policy paper is the National Plan for Patient Safety 2015-2020. Strategic goal #4 aims at increasing medication safety. One of the actions under this goal is the provision of medication reconciliation; with an implementation goal of 90% of all P-NHS units by the end of 2020. The Quality and Safety Commissions of hospitals and primary health care units have the responsibility for the implementation of the National Plan for Patient Safety.¹³ This commission includes the participation of publicly employed primary care pharmacists.

PRIMARY CARE HEALTH POLICY AND THE ROLE OF THE PHARMACIST

Primary health care is considered as the basis for achieving universal health coverage and optimal care outcomes. This view has been endorsed by the current Government but also by former administrations. The Portuguese primary health care reform in 2006 was characterized by the organization of health care centers into larger administrative units, designated Health Centre Groups, and the creation of Family Health Units.^{9,14} Health Centre Groups are under the direct responsibility of Regional Health Administrations (ARSs). There are five of these regional branches of the P-NHS in mainland Portugal, with the mission of guaranteeing population access to health care, adapting available resources to local needs, complying with and enforcing health policies and programs in their areas of jurisdiction.

A significant feature of the primary health care reform is to expand and give greater autonomy to family health units; this is expected to leverage local responses by creating

more community care units and strengthening the links between primary health care, long-term care and palliative care. Another policy priority is providing primary care with additional multidisciplinary specialties and to encourage the adoption of new workflow models. Family nurses are an example of these new specialties. Integration of clinical psychologists and nutritionists in primary health care units has also been announced. To date, there is no mention of pharmacists and their role in this setting or their inclusion in family health units. However, the multidisciplinary approach may be an enabler for including additional health care professionals, who can add value to care provision.¹⁵ In fact, the Portuguese Family Health Units National Association (USF-AN) has advocated for greater skill-mix, through the incorporation of primary care pharmacists with advanced competencies in clinical pharmacy into these multidisciplinary teams.¹⁶ Currently, the regulatory body of the pharmacy profession in Portugal, the Portuguese Pharmaceutical Society, does not endorse clinical pharmacy as a specialty. In theory both hospital and community pharmacists may qualify as clinical pharmacists, depending on their level of practice, and be subjected to standards that remain to be defined. Staff pharmacists from the ARSs, who have a hospital background, have occasionally taken up this role in primary care units. These primary care pharmacists represent a limited pharmacy workforce for clinical services as they are only 33 for the entire country. They are public servants and their main roles are managing medicines procurement (all 100% engage in these activities), public health activities (including provision of scientific and technical counselling at an ARS level, involvement in policy recommendations, drug use studies, monitoring indicators for contracted services; around 70% engage in such activities) and clinical pharmacy (including prescription validation and medicines reconciliation; around 30% engage in these activities).

Although no specific mention is made to the role of pharmacists in primary health care in existing health policies papers, many strategic goals for this setting include activities where pharmacists' training is an asset for the multidisciplinary team and, more importantly, for people living with illness. An example is the "pharmacotherapy prescription qualification" strategy, aiming to reduce costs whilst achieving maximum benefits for people using medicines. This strategy relies on recommendations issued by Pharmacy and Therapeutics Committees in primary health care, underpinned by scientific evidence. Primary care physicians and pharmacists are, by law, members of these Committees, and exemplify a bottom-up approach to change addressing unmet needs of clinical practice.¹⁵

Polypharmacy management in people living with multimorbidity

To address population ageing and the absence of structured programs to manage polypharmacy in primary care, a pilot service was designed and implemented in two ARSs by an interdisciplinary team involving primary care pharmacists, general practitioners (GPs) and nurses.¹⁷ This service targets chronic, complex and fragile people over 65 years old and entails a structured initial face-to-face medication review performed by the primary care pharmacist in patients referred by the GP, followed by a discussion about opportunities for medicines optimization

and a follow-up, based on an agreed plan, with safety and effectiveness indicators for medicines and other pertinent strategies, such as education, lifestyle counselling and medication adherence enabling interventions.¹⁸ Where appropriate, usually in the less complex cases and subjected to patient's agreement, community pharmacies are contacted to ensure continuity of care. This collaborative model is new and has so far, no remuneration. In this novel service primary care pharmacists have access to medical records and can discuss the case with patient's care team. The service is currently available in three primary care units, and the expansion to the remaining 12 units depends on workforce availability. It represents an opportunity to foster the integration of community pharmacies in primary health care. Even though the inclusion of a primary care pharmacist in primary care units is currently centered in the management of polypharmacy, it may encourage involvement in other activities, including physician and nurse education on new therapies. This service may be considered disruptive in the Portuguese context, since multidisciplinary teams in this area are new. Such programs fit into the major changes planned and designed by policy makers in the scope of primary care provision.

COMMUNITY PHARMACY IN PORTUGAL

There were 14,423 registered pharmacists in Portugal in 2017, 59% of whom practice in community pharmacy, 9% in hospital pharmacy and the remainder distributed through other areas of pharmaceutical sciences.¹⁹ In 2016, according to the FIP, there were, 14.9 registered pharmacists per 10,000 inhabitants, quite high in relative terms to other countries.²⁰ The number of pharmacists has progressively been growing in Portugal, aligned with international projected trends.²¹ Interestingly the pharmacists in Portugal are young, with 41% below 35 years of age and 10% aged between 35 and 44 years.¹⁹

In 2018, the 2,923 community pharmacies were distributed throughout the country.²² Ownership rules and geographical distribution changed in 2007 with legislation that terminated the exclusivity of pharmacy ownership by pharmacists. Community pharmacies may be owned by non-pharmacists, but each pharmacy must have a pharmacist technical director responsible for the functioning of the pharmacy and compliance with good pharmacy practice. The ownership of a pharmacy is, however, restricted to individuals or corporations that have a conflict of interests in medicines dispensing, such as wholesalers, pharmaceutical industry, associations representing pharmacies, prescribers, private entities providing health care and P-NHS subsystems that co-pay for medicines.²³ The legislation also states that for a new pharmacy to be opened, there must be a minimum of 3500 inhabitants in the location, unless the pharmacy is opened at a distance of more than 2 km from the closest pharmacy or, within residential areas, 350 meters between pharmacies in a direct line; 100 meters between the pharmacy and the health care unit, except in places with less than 4,000 inhabitants.²⁴

There are two associations representing the interests of community pharmacy owners in Portugal, the National

Association of Pharmacies [Associação Nacional das Farmácias - ANF] and the Association of Pharmacies of Portugal [Associação de Farmácias de Portugal - AFP]. Membership is voluntary for both associations. ANF represents 95% of pharmacies in Portugal and has the mission "to make pharmacies the most valued primary health-care network by Portuguese citizens". To achieve this goal, ANF has developed companies, structures and projects which cover areas relevant to pharmacies, in political, professional (education and pharmaceutical services), and financial areas. One of the main activities for both organizations is the relationship and advocacy with government and health administration, in order to ensure that pharmaceutical legislation and regulation, as well as operationalization, take into account the actual and potential added-value community pharmacies can bring to the health of the population.²⁵ The plan of activities of ANF for 2020 identifies as key intervention areas for investment: the development of new services that meet the health-needs of the Portuguese population; perusal of the pilot to dispense HIV medication in community pharmacies and investment in developing methodologies for extending to oncology; supporting pharmacies in the implementation of point of care services for HIV and viral hepatitis; implementation of a service to respond to minor health problems, including physician referral when appropriate; promote remuneration of pharmaceutical intervention; developing clinical pathways integrated into a clinical support system for pharmacies.²⁶

Pharmacies in Portugal may sell medicines for human use, medical devices, veterinary medicines, homeopathic medicines, herbal products, medical devices, nutraceuticals, cosmetics, products for childcare, products of comfort and food supplements.²³ In addition, the legislation foresees the services that may be provided in pharmacies by qualified pharmacists and other allied health care professionals (Table 1).^{27,28}

Community pharmacies' revenue come mostly from a mark-up margin on the price of medicines dispensed. In the case of prescription medicines, the remuneration system is set by the Government. Major changes were implemented in 2012 and further adjusted in 2014.²⁹ The system combines a regressive mark-up based on a percentage of the medicine ex-factory price (from 18.4 to 27.9%) and a progressive dispensing fee per package (from 0.63 EUR to 8.28 EUR).³⁰ For most non-prescription medicines and medical devices, as well as other products available in the pharmacy, the selling price is freely established by each pharmacy and remuneration is a percentage mark-up, on average estimated to be around 28%.

In terms of service remuneration, the system is quite different, and these are, in general, charged using retrospective or prospective analysis.³¹ Retrospective methods are the most commonly used in the outpatient setting and include for example the fee-for-service, whereas prospective methods tend to be adopted in the hospital setting and an example is a coding system for diagnostics and associated procedures entitled the homogeneous diagnostic groups.³² In Portugal, the two community pharmacy services remunerated use fee for service, established nationally by the Government by law and regardless of clinical outcomes for the patients.

Table 1. Community pharmacy services established by law.^{27,28}

- Home support
- First aid
- Administration of medicines
- Use of diagnostic and therapeutic auxiliary means
- Administration of vaccines not included in the National Vaccination Plan
- Pharmaceutical care programs
- Nutrition appointments
- Adherence programs, medicines reconciliation, services making use of multicompartiment aids, health education programs for the use of medical devices
- Point of care testing for the screening of HCV, HBC and HIV, including counselling pre and post-test and referral of positive cases to hospital care following referral channels established by the Ministry of health
- Nursing services, including wound treatment and care of people with ostomies
- Level I care to diabetic foot, according to the recommendations of the Department of Health
- Promotion of campaigns for health literacy, disease prevention and healthy lifestyle promotion.

In 2016, legislation was passed for contracting public health services to community pharmacies. Interventions aligned with health policy priorities, such as programs integrated in primary care, needle and syringe exchange program and medication adherence interventions are mentioned in this regulation.³³ One of the two services currently remunerated is the needle and syringe exchange program available in community pharmacies since 1993. This internationally acclaimed program for its contribution to minimize HIV and other blood-borne diseases was initially delivered pro bono by pharmacies.³⁴ Program evaluation indicated that pharmacies' contribution resulted in a net benefit of 3.01 EUR per needle exchanged, originating overall system savings of over 2 million euros in a 5-year period.³⁵ The reimbursement system reflected these data, pricing at 2.40 EUR each package of 2 needles exchanged.³⁶ This program is closely monitored and the most recent data available shows a 7% increase in the number of needles exchange in pharmacies between January and June 2019, compared to January to June 2018, corresponding to a monthly average of 11,472 needles, totaling 137,272 in the period considered.³⁷

The other remunerated service is generic substitution, which aims to the increase of generic market share. Legislation to reward generic substitution and incentivize dispensing the least costly options has been active since 2015 and the most recent update refers to 0.35 EUR/package.³⁸ The market share of generics for 2018 was 48.4% in units or 53.7% if measured in defined daily doses. This corresponds to an increase near 17 percentage points since 2000.³⁹

Despite legal coverage, no other services were contracted to date. Other services (Table 1) are freely priced by pharmacies and paid out-of-pocket by users. The price of these services vary widely (including services delivered for free) and there is no publicly available data on number of services or pricing. Nevertheless, it is compulsory by law that all pharmacies display in a public area (physical space and website) the full list of services available and price charged for each service. As an example, the administration of vaccines in pharmacy may be charged between 0 and 5 EUR.

The Ministry of Health has promoted a reinforced public health role for community pharmacies, namely by enabling certified community pharmacists to dispense HIV medication, previously dispensed exclusively in hospital, in

a pilot program and to reinforce the responsible use of these medicines in stable patients, working in articulation with P-NHS hospitals. The pilot is ongoing in one region, and depending on success, is foreseen to be broadened to also cover oncology medication.³⁹ Currently, the regulatory agency has a system in place to monitor the effectiveness and safety of health technologies. This system is mainly focused on high-cost medicines, i.e., oncology, orphan drugs, antivirals, etc., and relies mostly on hospital-based data sources, or on population-based registries when available.⁴⁰ However, considering a potential shift of some of these medicines to the community pharmacy, the intention to also resort to the pharmacies' information system for health technology assessment has been announced.³⁹

Félix *et al.* have estimated that community pharmacy services in Portugal provide a quality of life gain for citizens of 8.3%, resulting in savings for the P-NHS and general population over 800 million EUR.⁴¹ Services valued by citizens, include the immunization service, point of care testing and medication review, to name a few.⁴²⁻⁴⁴ In fact, there are a number of services paid out-of-pocket, e.g. point of care testing (blood pressure, glycaemia, cholesterol, etc.), totaling more than 20 different services (Table 1).

Recently, the government started a pilot program providing influenza immunization in community pharmacies. People aged over 65 years could have their vaccine administered in a healthcare center or in a community pharmacy at no cost and with no prescription order required. During 2018 winter season, 7,000 individuals from the municipality of Loures preferred their community pharmacy to the healthcare center. This suggests the potential benefit of providing access through community pharmacy however it cannot yet be determined if the target to increase vaccination coverage was achieved.⁴⁵

The implementation of technology in community pharmacy practice has been growing, including using robots to aid in dispensing to maximize workforce, and using algorithm-based programs to support identification of medication errors.⁴⁶ Electronic prescribing has become fully implemented in Portugal in 2020, through which people no longer need to resort to paper prescriptions and shows that technology barriers and information access may be overcome.⁴⁷ Full use of technology is likely to contribute to further development of advanced services in the best interest of people living with illness, if pharmacists and

representative associations see it as an opportunity and not as a threat.⁴⁸

Challenges in integrating community pharmacy and pharmacists into primary health care

One of the main challenges for community pharmacies to become integrated in the P-NHS is their private ownership. A paradigm change by government is required, to regard private providers as a supplementary or complementary source of health care, similarly to what occurs with privately managed hospitals. Another key challenge is to achieve full data integration, so that community pharmacists may have access to patients' data and can contribute to updated information by registering their interventions. This is an important prerequisite to some of the services mentioned such as medicines reconciliation. It is also important for national public health information particularly in the context of vaccination coverage, for which some pilot experiences are already in place, that vaccine administered in the pharmacy are registered in the online health bulletin. These pilot experiences show that the access of data is more a matter of political will than a technical issue.

Crisis may lead to opportunities and the current COVID-19 pandemic is a good example of how pharmacies can contribute to the seamless supply of medicines.⁴⁹ There were two main measures, supported by legislative changes that created the possibility for community pharmacies to deliver hospital-only medicines for extended periods (including antiretrovirals, immunotherapy, etc); and the possibility for renewal of chronic medication in community pharmacies.^{50,51} Both measures were created and implemented in order to provide access overcoming existing barriers and recognizing competences of professionals involved. Such measures became possible in troubled times, which shows that when there is an urgent need, barriers may be overcome.

CONCLUSION

Epidemiological trends in Portugal clearly show there is an ageing population with a growing prevalence of non-communicable diseases. Societies are also growingly more technological and more empowered. Services should be redesigned to serve societal needs and not to foster professional interests. Pharmacists may have an enormous contribution to meet sustainable development goals (SDG), particularly in ensuring healthy lives and promoting wellbeing at all stages (SDG #3) as well as promoting a more effective use of limited resources. There are missed opportunities, including for instance, engagement in exercise and health promotion through liaising with local communities, schools or residential facilities.⁵² There are also unmet needs in primary care services in marginalized groups, including those living in prisons, the homeless and migrants, where pharmacists could make a difference working collaboratively.⁵³ There are activities being implemented in community pharmacy solely for commercial reasons, even if there is no real need or gaps in service provision, including optometry, audiology and other services. Pharmacists have no competence in these areas and merely make their space available to external providers. Clearly one area for continued and reinforced investment will be the establishment of clinical pharmacy as a competence or as a specialization area, which can support medicines optimization across the entire patient pathway, from community, to primary care, to hospital and ultimately to specialized care.

CONFLICT OF INTEREST

Filipa Alves da Costa declares to have an advisory role for the Portuguese Pharmaceutical Society. The other authors declare no conflict of interests.

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