

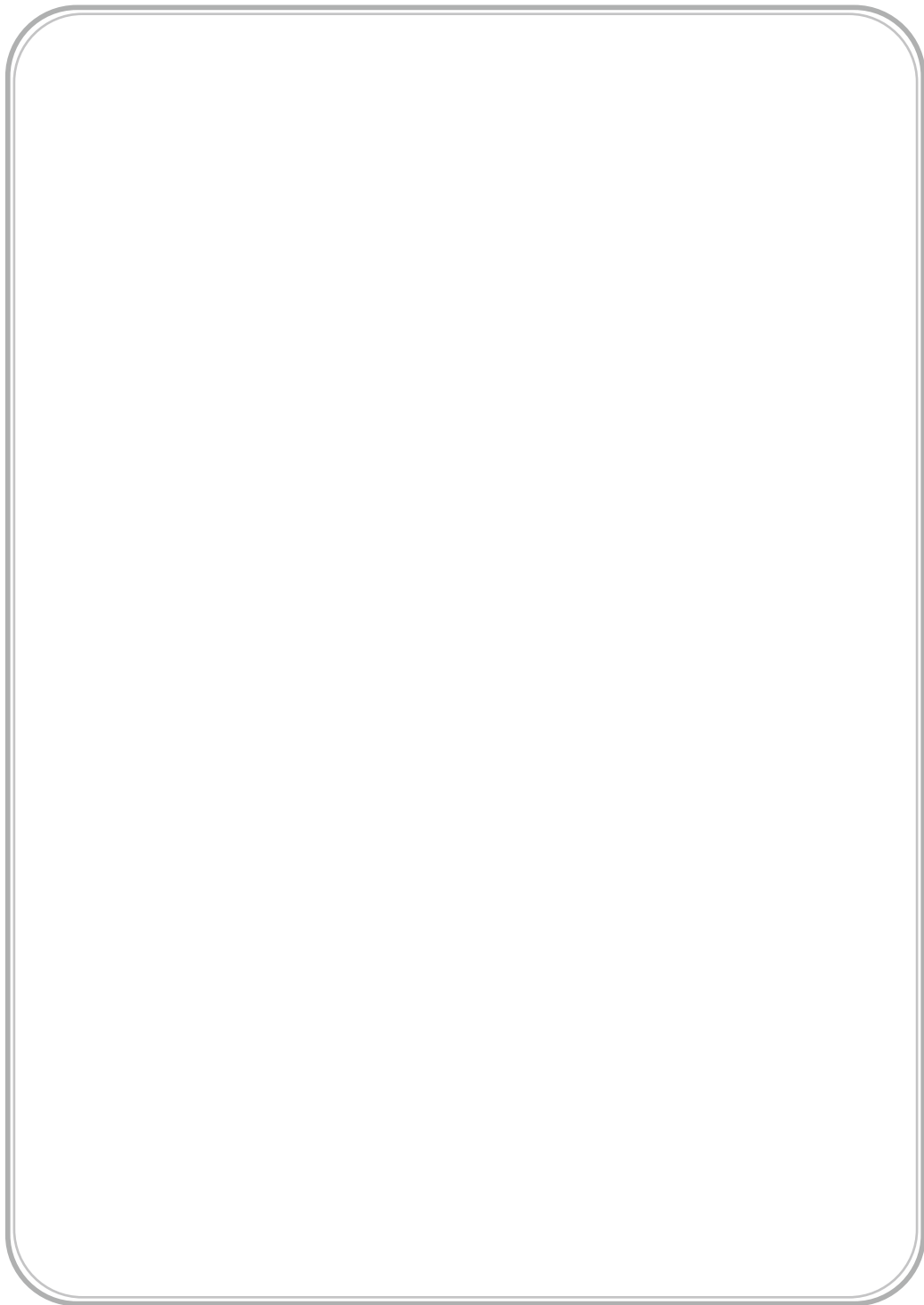
COMMUNITY PHARMACY PRACTICE

Around the Globe - Part One



Indian Pharmaceutical Association

February 2018



Community Pharmacy Practice
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The Indian Pharmaceutical Association thanks all the authors who have given their precious time and been generous in providing the community pharmacy practice article of their respective country. The publication of this document would not have been possible without their contribution.

Foreword



It is a great pleasure to write the foreword for this ebooklet. It is a kind of a dream come true for us at IPA CPD eTimes. In the year 2012, we started with this bimonthly e-Periodical, i.e. IPA CPD eTimes. Though it was going to be quite challenging in terms of devoting time, our team - myself, Raj Vaidya and Dr Dixon Thomas were totally passionate about bringing out this e-Periodical as a means to reach out to fellow pharmacists all across India. One of the objectives was to provide pharmacists with ready to use information which they can use for counselling patients. Along with it, we thought it very important to showcase global pharmacy practice to our Indian pharmacists and stakeholders.

While thinking about different columns for eTimes, the thought which was topmost in mind was to have an article on community pharmacy practice of one country in each issue and the definite dream was to compile all these when we reach a collection of a significant number. We knew that the differences in the practices in other countries, their laws, their patient oriented services, status of pharmacist, education levels and so on, would be a great learning. Crossing the boundaries, learning from each other, getting new ideas is always a very fascinating, and exciting process. But to get an article from one country for each issue every alternate month, was not an easy task. But we had some confidence that our global colleagues will accept the request and will provide us the write ups. Thus we started this series of articles by the end of 2012. Since the beginning, for each issue, we got a great response from local-global readers. Our seniors at IPA encouraged us tremendously.

Now we are in the year 2018, with a collection of articles from 30 plus countries. Though so far we haven't covered the entire globe, we thought it would be most apt to compile all these articles which could serve as a great resource for beginner students or practicing pharmacists or any pharma professionals who would like to get glimpses of the community pharmacy practices from around the world. And so here we are with this eBooklet. We express our sincere gratitude to all the authors who have been generous in providing the article of their respective country. We thank each one of them for their great efforts. Thanks to FIP and FIP Congresses because of which we could make enormous global contacts. Special thanks to FIP Community Pharmacy Section Executive Committee Members who were very supportive and all have contributed articles of their country. The FIP CPS Zoom Newsletter also carries each IPA CPD eTimes, which in turn increases the outreach of eTimes across the globe. Thanks to all at IPA and to the entire team of IPA CPD eTimes.

As we move forward we hope to cover the remaining countries and we hope to get the same response and cooperation from all our colleagues across the globe. Thank you all once again and hope you will find this ebooklet interesting and useful. Please feel free to circulate it further in your professional networks. Please do let us know your comments or any queries on email below or at ipacpdetimes@gmail.com.

Thank you.

Manjiri Gharat
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Message

Indian Pharmaceutical Association



It gives me tremendous pleasure and satisfaction to pen this message as the president of the Indian Pharmaceutical Association, an association that has been in existence since 1939 and constantly working towards a better future for the pharmacy profession in our country. IPA operates through five divisions, Community Pharmacy, Education, Hospital Pharmacy, Industrial Pharmacy and Regulatory Affairs. Soon after our country gained independence the Industrial Pharmacy and Pharmaceutical Education started to develop rapidly and Regulatory affairs soon caught pace with these developing facets of the pharmacy profession.

Today Pharmaceutical sector, as well as the Pharmacy Education arena, provide pharmaceutical products and well-trained technically-competent human resources to all most all countries in the world and the Indian Drug Regulatory system is quite well respected by the global regulators. The same cannot be said about the status of pharmacy practice in our country. Pharmacy practice in both community and hospital settings has to develop a lot to be considered on par with accepted global pharmacy practice practices.

IPA has set up the community and hospital pharmacy divisions during the years 1996-98 with an intention to have dedicated IPA members to take up chairperson positions of these divisions and work towards the development of pharmacy practice aspects of our profession. The Community Pharmacy Division (CPD) from the onset of the new millennium has taken up several path-breaking initiatives that helped community pharmacists and community pharmacy practice to gain the much-required recognition within the community, among the local and central regulators and more importantly by the state and central governments of our country.

One of the initiatives of CPD is this newsletter called the CPD eTimes, a bimonthly periodical, which is in its 7th year of publication. This newsletter, which started out as a 4-6 pages pdf document is being published regularly at no cost and is circulated by e-mail to many pharmacy professionals all over the world including most of the pharmaceutical associations and societies. The CPD eTimes helped IPA, its objectives and activities gain global recognition, while serving as a valuable educational tool to most community pharmacists in India. The CPD eTimes ran a series of articles on the state and standards of pharmacy practice in various countries by inviting a prominent pharmacy professional from each country to contribute. This book entitled "Community Pharmacy Practice, Around the Globe-Part One" is a compilation of articles published in the CPD eTimes on the Community Pharmacy Practice from various countries. This compilation would bring to the reader instant information and knowledge about the status of community pharmacy practice all around the globe and it would prove to be a must-read for all pharmacy practice professionals in our country. I congratulate the IPA-CPD division and all the persons involved in diligently bringing out this wonderful book, which will be a valuable addition to the IPA publications list.

Rao Vadlamudi
President, Indian Pharmaceutical Association
Hyderabad, Feb 6, 2018

Message

International Pharmaceutical Federation



It is with great pleasure that I provide a message to this booklet, as President of the International Pharmaceutical Federation (FIP). FIP is the global organization gathering 140 national associations of pharmacists and pharmaceutical scientists from over 100 countries around the world, and we are very proud to count among our member organizations, the Indian Pharmaceutical Association (IPA). FIP's mission is to improve global health by advancing pharmaceutical education, pharmaceutical sciences and pharmaceutical practice thus encouraging, promoting and enabling better discovery, development, access to and responsible use of appropriate, cost-effective, quality medicines worldwide.

I would thus like to congratulate IPA and, in particular, its Community Pharmacy Division, for the compilation of these articles from IPA CPD e-Times, which describe community pharmacy practice around the globe. Initiatives like these are completely aligned with FIP's global mission. It highlights the important role taken by community pharmacists internationally, with the ultimate objective to ensure a healthier life for citizens and their families. Furthermore, it is often the sharing of experiences that spurs advances in practice.

Back in 2012, the FIP Community Pharmacy Section set out to describe its vision for the future, describing how community pharmacies would look and operate in 2020. In particular, the section wanted to ascertain how pharmacists would work with societies and their representatives, to manage the complexity of maintaining health standards and the responsible use of medicines as defined by the World Health Organization and FIP. It envisioned a future where there would be adequate access to pharmacists and to quality medicines, guaranteed by a safe and secure distribution system; where the pharmacy team optimises patient outcomes and is key to the effective, rational and safe use of medicines; where the pharmacist delivers patient-centred services in cooperation with other healthcare professionals, in areas such as health promotion, disease prevention and chronic disease management; where pharmacies act as a gateway to the healthcare system and are central to its sustainability; and where pharmacists' services are remunerated according to the expertise and complexity of the care provided.

Reading all these interesting case reports, it is truly remarkable to observe the similarities of needs and challenges, and to witness the evolution of community pharmacy services in the different countries as a result of these drivers. Moreover, it is inspiring to observe how we are getting closer to the community pharmacy vision each day. As FIP is reviewing its mission and vision with the aim of producing an action plan for the coming years, we are happy to count on Manjiri Gharat's contributions to this important work, by being a member of the Strategic Planning Committee. I would like to take this opportunity to thank the IPA for this invaluable support and to congratulate the association for publishing this booklet. It is with a sustained spirit of cooperation that I wish you all a most fruitful reading.

Carmen Peña
President, International Pharmaceutical Federation
February 2018

An Overview on Community Pharmacies in Australia



There are more than 5000 community pharmacies in Australia, spread across our vast land from the largest cities to the most remote townships. Pharmacists complete a four year undergraduate degree or a two year postgraduate master's course. All graduate pharmacists wishing to practice must then complete a one year internship in either a community pharmacy or hospital setting before sitting further oral and written exams before they are registered to practice. One of the emerging issues in Australia is the increasing number of graduates which are being produced by the universities.

Ten years ago there were only seven pharmacy schools in Australia, today there are nineteen producing more than two thousand graduates per year. While there is still a relative shortage of registered pharmacists in rural and remote areas, we are now starting to experience an oversupply in the larger cities and urban areas.

The principle activity of community pharmacy is the distribution of prescription medications under the pharmaceutical benefits scheme (PBS), to citizens of Australia. The PBS provides subsidized medications to all citizens. Depending on a person's social security status, they may pay a contribution from as little as \$5.90 per prescription to a maximum of \$36.10 per prescription.

The government pays the balance of the cost on the person's behalf. The annual cost of the PBS in Australia is approximately \$10 billion. The Pharmacy Guild of Australia and the Commonwealth Government negotiate the Community Pharmacy Agreement every five years. This agreement formalizes the remuneration to Pharmacy for supply of medications under the PBS and also for professional services provided by community pharmacy.



In recent years the Government has looked to reduce the cost it pays for medication on the PBS. It has achieved this by a process of price disclosure, which by referencing the cost it pays to the actual cost of medication to the pharmacist, has allowed for savings of more than \$1billion to be achieved. This has had a direct effect on many pharmacies' profitability, and has forced many pharmacy owners to look to provision of "in pharmacy" professional services to offset these losses

The Community Pharmacy Agreement funds a number of in pharmacy services and also medication management reviews – these include:

MedsCheck: A pharmacist initiated non-clinical review of an eligible patient's medication. This review is designed to better inform a patient of their medication, what it is and how it works. Patient compliance is also established. This review is designed to be done in the pharmacy, in a private consultation area and should take approximately 45 minutes. The Government pays the pharmacist a fee of \$60.00 for this service.

Diabetes MedsCheck: Similar to a MedsCheck, but specifically targeted at Type 2 diabetics. This is a slightly more detailed review which may take one hour for which the Pharmacist is paid \$90 by the government.

Home Medication Reviews (HMR): These are a detailed clinical review of a patient's medication which must be requested by the patient's doctor. The review involves an interview with the patient, in the patient's home, followed by a detailed report written by the pharmacist which is returned to both the patient's Doctor and Community Pharmacist. An HMR can only be performed (both interview and report) by an Accredited Pharmacist.

Residential Medication Management Review: This is a clinical review of a patient's medication who resides in a residential aged care facility. This review is done in collaboration with the patient's doctor, and may only be performed by an accredited pharmacist.



Many community pharmacists now offer disease state management services and disease screening services within their pharmacies. These include blood pressure monitoring, cholesterol monitoring, INR monitoring, weight loss programmes and baby health clinics to name a few. All of these enhance the role of the community pharmacy as a readily accessible primary health care destination, where well trained staff are always available to service patient needs. While dispensing of prescriptions accounts for 75% of most pharmacy's turnover, it can range from 20% to 95% in some cases. In recent years, the Australian market has seen the emergence of "big box" style discount pharmacies. These may be up to 10,000 sq m in floor space and usually have a very aggressive discount pricing strategy. These pharmacies have forced many smaller operators out of the market place or caused a dramatic change in the marketplace dynamics where they have opened up. The Government does not allow discounting of the patient contribution for NHS prescriptions.



The landscape of Community Pharmacy in Australia has changed dramatically over the past five to ten years. We have moved from an almost single dependence on supply of prescriptions to a model which embraces increasing levels of professional services provided inside and outside of the pharmacy, a more aggressive over the counter health and beauty and medicine offer, and a more efficient and competitive prescription medicine offer. With this new balance of community pharmacy offers, I am convinced that our industry will continue to prosper and to serve our patients well for all their pharmacy related needs.

Community Pharmacy Practice in Canada



Pharmacists in Canada continue to rank near the top of polls measuring most trusted professionals. That trust no doubt comes by professionals adhering to a code of ethics and standards of practice and professionals expressing a desire to help the patient with their healthcare and pharmaceutical needs.

In this article we will highlight some current activities in Canadian pharmacy.

Connect and CARE Model:

In May 2013, 2 Canadian researchers Lisa Guirguis and Sherrill Johnson developed a toolkit to investigate and support increased communication between pharmacists and patients. The landscape of community pharmacy is changing rapidly across Canada. Health care providers are increasingly moving towards the adoption of patient-centred care models, which require shared decision-making between health care providers and patients. Concurrently, new pharmacy service frameworks are being implemented across the country, giving community pharmacists the ability to prescribe, inject medications and provide routine medication reviews. In many jurisdictions, reimbursement frameworks compensate pharmacists for performing these new roles. Community pharmacists provide services that are much needed with an aging Canadian population, increasing rates of chronic disease, and insufficient access to physician services.

Community pharmacists have the distinction of being one of the most geographically and temporally accessible health care service providers in Canada, yet are also noted as a vastly underutilized resource in community-based health care services.

In spite of media announcements regarding these new services, patients using community pharmacies are often unaware or confused about the range of health care services that their pharmacists can now provide. There also appears to be a lack of awareness regarding the critical roles community pharmacists can play on health care teams.

For many pharmacists, the process of actively increasing engagement with patients may require a new understanding of the patient-pharmacist relationship and the development of new skills in order to practice effectively in the new pharmacy environment.

The goal of this project was to produce an evidence-based model that would support community pharmacists to increase engagement with patients in community pharmacies.

The Connect and CARE Model is comprised of the following five stages, illustrated below:

1. **Connect:** Take a moment to connect with the person at the counter.
2. **Collaborate:** Talk with the patient about medication or medical issues. Collaboration in a patient-centered model assumes that communication will be bi-directional, between pharmacist and patient, and address patient needs and concerns.
3. **Apply Clinical Expertise:** Use clinical knowledge and expertise to ensure patients receive the right medication-related solutions.
4. **Respond:** Respond to patient's needs with a personalized plan, with information that is tailored to - and relevant for - the individual patient. Support the patient in understanding how medication information applies to their specific needs and concerns.

5. Encourage Monitoring and Follow-up: make patients aware pharmacists are interested in their health and want to know how they are doing. Also ensure patients have enough information to make sure their medications are working for them.

Expressing Empathy helps to create and maintain the connection. It can occur at any stage – or all stages – of the Connect and CARE Model.



Arthritis screening and support program:

Shoppers Drug Mart – Canada’s largest pharmacy network launched the company’s Arthritis Screening program - a unique way for Canadians to work with a pharmacist to help detect arthritis early and manage their condition. An estimated one in six Canadians aged 15 years and older live with arthritis and its prevalence has a tremendous impact, translating into lost productivity, absenteeism and increased health care spending – costing an estimated \$33 billion annually. Arthritis is the second most frequently mentioned condition as a cause of disability among men, but first among women. Arthritis related disability includes limitations in mobility (moving around, reaching and bending and transportation); self-care; domestic life; and community, social and civic life.

Canadian Health Minister Rona Ambrose is quoted as saying: “Our Government supports initiatives that help Canadians better manage their health and improve their quality of life. We are pleased to have funded research that contributed to the development of this innovative new program that will improve the quality of life of Canadians living with arthritis.”

The program was developed from research carried out at the Arthritis Research Centre of Canada with funding provided from the Government of Canada through the Canadian Institutes of Health Research.

Pharmacists at more than 1,200 Shoppers Drug Mart stores across Canada will be providing arthritis screening and information to Canadians as part of a three-year partnership between Shoppers Drug Mart/Pharmaprix, Arthritis Consumer Experts and the Arthritis Research Centre. The Shoppers Drug Mart Arthritis Screening is the first and only program in Canada designed with women in mind because the disease affects two out of three or 2.8 million Canadian women. To help detect the disease at an early stage, the program includes a self-administered joint exam and questionnaire. It also helps Canadians with arthritis work with a pharmacist to monitor their symptoms and medication over time to prevent the disease from worsening.

Pharmacist and researcher Carlo Marra and his team have invested enormous energy in developing the screening exam tool for pharmacists, with the hope Canadians will get screened through this program and get access to the care they need to improve their health and quality of life.

Pharmaceutical Opinion Ontario:

Pharmacist Bryan Gray feels that pharmacy in Canada is facing many challenges but also many new opportunities. With the expanding scope of practice for pharmacists, remuneration is available for a variety of cognitive services. With an aging Canadian population taking increasing amounts of medication, there is great potential for side effects and/or drug interactions. To remedy this, the Ontario MedsCheck program was launched as a 20- to 30-minute one-on-one meeting with a community pharmacist to review the medication regimen and look for any drug-related problems or areas for optimization. Following a medication review, the pharmacist may receive remuneration for providing clinical recommendations through the Pharmaceutical Opinion Program.

The Pharmaceutical Opinion Program launched in Ontario on September 1, 2011, and is intended to supplement the MedsCheck program that began in 2007. It is intended to provide a structured framework for the identification of potential drug-related problems (DRPs) and subsequent collaboration with prescribers. As a component of the expanded scope of practice, this program promotes improving patient outcomes, optimizing drug therapy and reducing inappropriate drug use and wastage. Recommendations for DRPs may be provided during the course of dispensing a new or repeat prescription, or following a medication review.

Developing strong relationships with prescribers will be critical as the scope of practice for pharmacists continues to expand. As minor ailments prescribing, adaptation and substitution become more common, prescribers must be able to trust the pharmacist to make evidence-based, patient-centred decisions. Even when pharmacists are able to access the patient's medical record, interprofessional collaboration will still be essential.

Bryan's complete article can be read at <http://cph.sagepub.com/content/146/6/329.full>

9000 Points of Care: Improving Access to Affordable Healthcare

The member corporations of the Canadian Association of Chain Drug Stores (CACDS) along with the Canadian Generic Pharmaceutical Association (CGPA) have aligned in Canada's broader pharmacy community to play a vital role in ensuring the availability and affordability of drug therapies that Canadians need. That alignment delivers an estimated \$12.5 billion in economic value to Canada's healthcare system every year. That \$12.5 billion in value comes from preventing hospitalizations, offering a strong portfolio of generic medications, and making the most of an efficient distribution system and supply chain. Their nationwide community includes prescription drug manufacturers, distributors and nearly 9,000 community pharmacies affiliated with and through CACDS.

Out of this collaboration has come **Broader Pharmacy's Plan for Improving Access to Affordable Healthcare**. It outlines five key initiatives that seek to improve patient outcomes, contain costs, and ensure the sustainability of our healthcare system for the sake of the patients of tomorrow. In working together, Canada's broader pharmacy community can in three years: Prevent up to 600,000 ER visits, 1,500 hospitalizations, and free up to 2.4 million physician hours for focus on more critical care by expanding pharmacists' scope of practice to include treating minor ailments and administering vaccines; Prevent up to 1.3 million ER visits, 500,000 hospitalizations, and free up to 6.3 million hours of physician time by managing chronic conditions more effectively; Reduce system costs by \$7 to \$9 billion through improved access and use of affordable medications; Implement state-of-the-art emergency preparedness and pandemic response systems by leveraging pharmaceutical distributors; and Avoid up to 300,000 emergency room visits and up to 86,000 hospitalizations resulting from adverse drug reactions by focusing on better electronic infrastructure and resources, connectivity, and information sharing.

The plan's five key initiatives are:

1. Treating minor ailments and administering vaccines by continuing to expand pharmacists' scope of practice;
2. Ensuring affordable access to key medications by creating policies and plan designs that encourage lower-cost alternative therapies;
3. Helping patients manage chronic conditions more effectively to improve quality of life and keep patients out of critical care;
4. Leveraging the pharmaceutical distribution model by building state-of-the-art emergency preparedness and pandemic response systems; and
5. Further preventing adverse drug reactions by focusing on information sharing, user-friendly eHealth systems, and connectivity with other healthcare practitioners.

Details on this plan are available at <http://9000pointsofCare.ca>

Community Pharmacy Practice in Croatia



Croatia has a long tradition of pharmacy, with the first community pharmacy established in 1271 in the town of Trogir, followed by a community pharmacy opened in Dubrovnik in 1317 inside a 14th-century Franciscan monastery, one in Zagreb in 1355, and a first hospital pharmacy established in Dubrovnik in 1420. It should be emphasized that the community pharmacy opened in Dubrovnik within the monastery, without ever closing its doors, is celebrating 700 years this year, which makes it one of 3 oldest operating pharmacies in Europe.

From the first medieval pharmacies, during 18th and 19th century pharmacy in Croatia underwent considerable development. In 1858 the first professional pharmaceutical organization was established, pharmaceutical studies were organized at the University of Zagreb in 1882, and the first Pharmacognosy institute in the world was established in Zagreb in 1896. During the 20th century, the rise of pharmaceutical industry had a significant impact on the development of pharmacy practice.

Educational requirements

There are 2 pharmacy studies in Croatia, at the University of Zagreb Faculty of Pharmacy and Biochemistry, with a 135 years old tradition, and a just recently opened one at the University of Split, co-organized by the Faculty of Medicine and the Faculty of Chemistry and Technology.

Together the two studies enroll around 160 pharmacy students yearly. Based on the results of the state high school graduation exam, the very best students choose to study pharmacy.

The five-year Master of Pharmacy program gives basic, biomedical and pharmaceutical sciences knowledge and expertise, but students also learn to practice as patient-oriented healthcare professional who will work in a team with other healthcare providers. Theoretical lectures on pharmacotherapy with clinical pharmacy, pharmaceutical care, health legislature, communication skills and pharmaceutical ethics and deontology, are followed by 6 month practical training in community and hospital pharmacies. Studies are completed by taking the final exam and the professional exam.

Besides the diploma, the student also acquires approval for independent work in the healthcare system at jobs foreseen for the pharmacy profession (community and hospital pharmacies). Membership in the national Chamber of Pharmacists is compulsory to work in a community and/or hospital pharmacy. A license is issued for a period of 6 years, and continuing education is compulsory.

In the recent years a number of one year postgraduate specialist studies have been introduced, and Clinical Pharmacy being among most popular ones. There is also a 3 year health specialization in clinical pharmacy.

Number of pharmacists

Today Croatia, with a population of 4.2 million, has over 3000 registered pharmacists, majority (93%) of them female. Over 2400 registered pharmacists are working in about 1100 pharmacies all over the country.

After the World War II until 1991, when Croatia became independent for the first time in its history, pharmacies were exclusively state-owned. Since then the privatization of the pharmacy sector began and many new pharmacies were opened. Today over 50% of all community pharmacies are company-owned chains, while the rest are state/publicly owned, owned by one or a group of pharmacists, or are in lease.

Working alongside pharmacists in community pharmacies there are also pharmacy technicians, who after finishing a 4 year secondary school have to take a pre-registration training for 1 year, and pass the professional/state exam at the Ministry of Health. Pharmacy technicians can dispense only non-prescription medicines and other over-the-counter products.



Infrastructural and legal requirements

Although a pharmacy can be owned by a non-pharmacists and by wholesales, and there is no limitation to a number of pharmacies a legal person can own, a licensed pharmacists must always be present in a pharmacy to manage and operate it.

In order to open a new pharmacy, two main conditions have to be met, first the number of people living in the area, and second the distance between the closest existing pharmacy. The minimum distance depends on the size of the city. In cities with over 500 000 people the distance has to be at least 200 meters, while for smaller cities it goes up to 500 meters.

A pharmacy has to have a minimum required area of 35 m², a laboratory of at least 15 m², dishwashing area of 6 m², a storage area of at least 15 m², manager's room of 6 m², an extra room for night shift if the pharmacy is providing one, special area for easily flammable and combustible chemicals, a wardrobe and a lavatory. A detailed description is provided also on the technical, IT, and laboratory equipment each pharmacy has to have. Different temperature refrigerators for medicines storages also have to be ensured. Professional books and manuals that have to be in every pharmacy are also defined. The broadband internet is also a necessity, since e-prescribing is implemented on a national level. Different records on all aspects of pharmacy activities have to be carefully noted.

Online pharmacies were first introduced in 2013 and are limited to dietary supplements and cosmetics sales only. But Croatia has so many pharmacies that it doesn't take more than a few minutes' drive to reach your local community pharmacists. Therefore some say there is not really even a need for an internet distribution of medicines.

Pharmacy services

Pharmacies in Croatia hold the exclusive right to supply and dispense human medicines. However pharmacists cannot prescribe medicines, it is still a right reserved for doctors only who prescribe the medicines by their brand names. Electronic prescribing is implemented from January 2011 at the national level. This also implies that all pharmacists have broadband internet connection, and use dispensing and stock management software.

For reimbursed medicines in some cases there is co-payment made by the patient. If the patient doesn't hold an additional health insurance there is a 1.4 € participation, and for some medicines a difference in the price to be payed between drugs on A- and B-list needs to be paid as well. There are however patient categories that are exempt from this payment, e.g. children under 18, unemployed people, full-time students, and people with low incomes.

Non-prescription medicines, depending on their category, can be found in pharmacies only, or in pharmacies and specialized stores for retail sale of medical devices and medical products, but under the supervision of a pharmacist. Outside community pharmacies other traditional pharmacy products, such as herbal medicines, food supplements and vitamins, nicotine replacement therapies, and medical devices can be sold.

Hospital pharmacists are not yet an official part of the hospital team, but improvement with the introduction of clinical pharmacy health specialization has been made.



Besides dispensing prescriptions and repeat dispensing, which are remunerated by the Croatian Institute for Health Insurance, pharmacists are responsible for drug supply, production and quality control of magistral and officinal formulas, adverse drug reporting, disposal of unwanted and out-of-date medicines, and giving information about medicines for health professionals and general population. Night services are also provided in Croatia. Very recently the Croatian Chamber of Pharmacists announced new Recommendations and Protocols for Point of Care testing and Screenings. Other services provided in community pharmacies are for example provision of emergency hormonal contraception service, weight measurement, medicines use reviews, new medicine service (counseling of the patients with newly prescribed medicine for long term conditions), harmonization of pharmacotherapy, consultation on side effect, medication reconciliation, monitoring of patients using anticoagulants, weight loss school, smoking cessation, counseling on metabolic syndrome management, asthma patients advising, chronic pain management, counseling on responsible self-medication and use of non-prescription medicines and other OTC products, and many others.

However, it is very important to emphasize that so far no remuneration is offered to pharmacists for these services. It is one of the main focuses of the Croatian Chamber of Pharmacists to ensure that the dispensing fee is far greatly compensated, and to achieve a way for remuneration of above mentioned services which for sure lead to responsible and rational medicines use and outcome, prevention and disease management and health promotion.



Special campaigns

Croatian pharmacists are also organizing numerous public health campaigns (e.g. World Diabetes Day, World COPD Day, World AIDS Day, European Antibiotic Awareness Day, World Health Day etc.) with promotional and educational character, focused on screening, prevention and healthy lifestyle promotion.

Introduced for the first time in 2006, *Croatian day of pharmacies* is celebrated each year on 29th of October, in celebration of the first community pharmacy opened in Croatia, in Trogir in 1271. Croatian pharmacists also celebrate *World Pharmacists Day* on 25th of September introduced by the International Pharmaceutical Federation (FIP) in 2010.

With all this new, active approach, with additional services, with a step forward from a traditional dispensing role of a pharmacist, the perception of pharmacists in the public eye is changing. The pharmacist is no longer only a dispenser, a medicine seller with a focus on profit, but a true health care provider.

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1. www.hjlik.hr (Croatian Chamber of Pharmacists)
2. 1st Forum of Excellence in Pharmaceutical Care (Croatian Pharmaceutical Society)
3. Photo, old pharmacy: Zeljko Tutnjevic

Pharmacy Practice in Denmark



In Denmark, pharmacies have exclusive rights to sell prescription-only medicines to consumers. Likewise, a great number of over-the-counter medicines are only permitted for sale in pharmacies.

Pharmacy Education Programs in Denmark

To become registered pharmacist and/or to own a pharmacy in Denmark, minimum qualification required is MSc degree in pharmacy. MSc degree from Danish University of Pharmaceutical Sciences is the oldest program in Denmark. University of Southern Denmark is also offering both BSc and MSc in pharmacy programs duly recognized to register as a pharmacist which is accredited by ACE Denmark, the Danish Accreditation Institute. In Denmark, upon successful completion of MSc(Pharm) degree with 6 months internship (altogether 5 years), there are no additional exams required to be completed for becoming registered pharmacist and to practice pharmacy.

Danish pharmaconomist (pharmacy assistant) program is a 3-year vocational program mostly based on workplace training coordinated by a training center (Pharmakon) run by the Danish pharmacy owners association (Danmarks Apotekerforeningen). Pharmaconomist cannot own or run a pharmacy, but can perform most of the pharmacist's duties with some limitations, such as medication reviews, dosage corrections and interventions in the prescriptions, which should be done in cooperation with the registered pharmacist. Pharmaconomists can operate pharmacy outlets or medicine delivery facilities.

Obtaining Pharmacy License in Denmark

Pharmacies are regulated by the Danish Medicines Agency and the Ministry of Health (Danish Act on Pharmacy Practice 1995). As in many other European Union countries, a pharmacy is a licensed business owned by a pharmacist (MSc), who may also own up to four pharmacy outlets or independent pharmacies at the same time. The owner is economically responsible for financing and operating his or her pharmacy business (The Danish Pharmacy Owners Association 2015). To set up or run a pharmacy, one must have a license from Danish Medicines Agency. There are only limited numbers of pharmacy licenses approved in the country. An existing pharmacy owner who decides to retire will surrender the license to the Danish Medicines Agency who will call for applications for an available license. The applicant must be a qualified pharmacist. DMA will evaluate all the applicants and decide which applicant they consider best suited for the relevant license. DMA will invite the other applicants to comment on the preferred applicant, and following this consultation, DMA will decide which applicant should be granted the available license.

Number of pharmacies in Denmark

Denmark has a population of 5.5 million. At 1 September 2017, there were 237 pharmacies in Denmark, including 14 supplementary units, 9 supplementary licenses, and 2 online pharmacies. In addition, there are 78 pharmacy branches, 124 branches set up voluntarily, 48 pharmacy outlets, about 500 over-the-counter outlets and about 350 medicine delivery facilities, all of which are affiliated with one of the pharmacies. These amendments officially recognize community pharmacies as a part of the primary health care system in Denmark.

On an average, Danes have 3.8 kilometres to the nearest pharmacy. Three out of 4 citizens can pick up their medicines from a pharmacy or a pharmacy outlet less than 2 kilometres from home. Nine out of 10 Danes are satisfied or very satisfied with the distance to the nearest pharmacy.

Collaboration with companies

Proprietary pharmacists in Denmark have a notification duty and an obligation to apply for permission if they want to operate or have a relationship with a pharmaceutical or medical device company.

Moreover, pharmacists, pharmacy technicians and students within these professions must report to the Danish Medicines Agency if they receive financial support from a pharmaceutical or medical device company to participate in a professionally relevant activity abroad.

Pharmaceutical Price System in Denmark

The price of pharmacy-only medicine is the same in every pharmacy, and is regulated by the Danish Medicines Agency. The purchasing price is set (freely) by the manufacturer and the pharmacy mark-up is set by the government. There is a 25 % VAT on medicine. Reimbursement for medicines is provided by the national social security system for patients, but only for the cheapest of interchangeable medicines. Prices of liberalized OTC drugs is totally free and unregulated.

The fixed fee markup of pharmacies is the same for all pharmacy-only drugs (1.5 euro per package). A percentage of Pharmacy Purchasing Price (9 %) finances internal redistribution, night service, pension etc. Pharmacies are obliged to sell the cheapest version of interchangeable medicine (generic substitution). Prices of medicines change every two weeks.

Equalization system for better access

The equalization scheme, a profit sharing scheme which means more profit gaining pharmacies must contribute their turnover with less profit gaining pharmacies, to provide better access in rural and remote areas, is being maintained as it is in the current Act.

To make the readers understand the pharmacy system better, as example, a brief is given below about Taastrup Pharmacy and its functions, pharmacist duties, quality assurance.

Taastrup Pharmacy

Taastrup Pharmacy was established under Royal License on 11th March 1908, as a branch pharmacy of Glostrup Pharmacy. In 1994, Dr. Peter J. Kielgast, Former President of FIP, received royal license to the pharmacy, and the pharmacy moved to new property on 1st July 1996 which was designed by Kim Utzon son of Jørn Utzon (who has also designed Sydney opera house). Taastrup Pharmacy serves over 50,000 population living in Hoeje Taastrup municipality which is spread in 78 square kilometers area.



The pharmacy is structured with 4 branch pharmacies, medicine delivery facility apart from the main pharmacy.

Services provided in Taastrup Pharmacy

Like any other pharmacies, provides patient counseling services, checks drug interactions, runs health campaigns, delivery of medicines to homes and nursing homes and old age homes in the municipality. Apart from these services, trained and certified pharmacy staff conducts 'General Health checkups' and check-up and training on use of inhalation devices, vaccination (influenza vaccination to citizens) and also conducts medication reviews.

Obligatory medication interviews offered by pharmacists for newly diagnosed chronic patients for 20 minutes where the pharmacists interview about the newly diagnosed condition, medication, provide psychological support to the patient, medication information and counseling with a follow-up interview after 14 days. The pharmacists are reimbursed for the services like medication review, medication interview, training on the use of inhalation devices. Citizens in Denmark also get reimbursed for the medication which is also calculated by the pharmacy and reported to the social security authorities. It is also mandatory to report to Danish Medicines Agency on the sale of all the medicines and other products.

In Denmark, the citizens cannot just throw the unwanted medicines in dustbins. They are well informed to deliver unwanted or remains of medicines including the needs in the pharmacies for safe disposal. This waste is collected by the municipality for combustion. This way, the pharmacies help minimizing the antibiotic resistance and accidental medication poisoning etc. The pharmacy has also provides 'Dose dispensing' (unit dose dispensing) for geriatric patients. Dispensing of medicine where a pharmacy packages the medicine in small disposable plastic sachets for each intake. Each dose package is labeled with: patient name, social security number (civil registry number), name of the medicine(s), time to be taken. This helps the patients who cannot manage their medication for appropriate medicine administration without medication errors and to improve adherence.

Internet Pharmacy

Taastrup Pharmacy has internet sales through its online pharmacy where the patients can buy both prescription and OTC (Over-the-Counter) medicines. The pharmacy is also specialized in handling international prescriptions within EU.

Duties and responsibilities of pharmacy staff

Pharmacy owner: Overall administration responsibility. Pharmacy owner is mainly responsible for the economical situation of the organization as it is a personal license to own a pharmacy.

Assistant manager: Administrative and HR management including service and customer relationship. All the services offered in the pharmacy.

Information pharmacist: Pharmacist responsible for training the staff members, to update knowledge in medicine, amendments of drug regulations. Also responsible for dissemination of technical knowledge in the morning meetings (every fortnight).

Pharmacists are responsible for training the Pharmakonomet (Pharmacy technician) students. In connection with prescription filling, pharmacists are responsible to ensure that customers get the right medicine, information, interactions' check, counseling on medication. A Pharmacist is responsible for stock management including narcotic medicine stock checks.

Pharmacy staff is responsible to find the cheapest generic substitution while filling and refilling the prescriptions.

Human resources in pharmacy - Pharmacy owner + 4 pharmacists ; 21 pharmaconomists; 6 Service staff including drivers; 3 pharmaconom students and 1 bookkeeper . Total 35 staff members.



Inventory management Robot in the pharmacy

Taastrup Pharmacy has a dispensing robot which is integrated with the pharmacy's EDB system (Electronic database, the software that we use in the pharmacy). It will store the unsorted parcels in the warehouse and deliver the medicine when we are filling the prescription in the counter. It is 100 % accurate and delivers 1 parcel per 10 seconds. The robot can automatically makes a difference list and check the stock differences on a day-to-day basis.

Quality at the Pharmacy

Taastrup Pharmacy is accredited by DDKM - Danish Institute for Quality and Accreditation (first accredited on 26-09-2012). Quality documentation with Standard Operating Systems (SOPs) for all the processes which ensure quality of services to the patients.

Continuing education for staff

In Denmark, as per agreements with the employer and employee organizations of pharmacies, all the owner pharmacists are obliged to send the staff to CE programs to upgrade their knowledge. The staff with agreement by the management, can choose the courses that they would like to take each year.

The Generic Substitution System

Generic substitution has existed in Denmark since 1991. The Danish Medicines Agency decides which generic medicines are suitable for substitution. Pharmacies have an obligation to dispense the cheapest product within a substitution group. Substitution regulation ensures that the cheapest products obtain the greatest share of the market.

However, the following are some limitations on generic substitution:

1. Pharmacies must sell the least expensive products to patients unless the doctor and/or the patient prefer another product or unless the price difference is insignificant
2. Doctors can decide against substitution by writing "ej S" (no S) on the prescription
3. Patients can decide themselves whether they want a cheaper product or not.

Pharmacy Practice in Dubai

Pharmacy Practice in Dubai is on par with international Good Pharmacy Practice standards.

History of Healthcare

1972 - The Ruler of Dubai establishes the Department of Health and Medical Services (DOHMS).

1978 - The Central Services Complex, a designated complex for stores, laundry, CSSD and the engineering division, is established. The Central Services Complex provides essentials to Dubai's health facilities and handles the supply of drugs and equipment.

1998 - The concept of primary healthcare is established and adopted in line with the philosophy of the World Health Organization's motto "Health For All By The Year 2000". Around twenty health centres are opened across Dubai to ensure access to basic primary healthcare.

2007 - The Dubai Healthcare Authority (DHA) was formed under the directives of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE, Ruler of Dubai.

Courtesy: Dubai Health Authority, Our History, Government of Dubai. Available at:

<https://www.dha.gov.ae/EN/AboutUs/pages/ourhistory.aspx> (Accessed on March 15, 2015).

Leading Pharmacies in Dubai

Dubai is not short of pharmacies. Some of the important pharmacy chains are;

Four Seasons Pharmacy: is a leading pharmaceutical and healthcare supplies distributor in Dubai and UAE as a whole. The pharmacy began its Dubai operations in 1978 and has since grown to become a supplier of over 3500 products from around the world.

Bin Sina Pharmacy: is the premier pharmacy in Dubai, having started licensed operations in the city back in 1965. The Bin Sina flagship pharmacy is located at The Dubai Mall.



Super Care Pharmacy: has been in existence for over 30 years, providing essential medication, healthcare, wellness and beauty products. In the UAE, Super Care Pharmacy operates more than 15 outlets.



Aster Pharmacy: International pharmaceutical company with representative outlets in Dubai and the greater UAE. In 2014, the 100th shop of Aster Pharmacy was opened in the UAE.



Grand United Pharmacy: located within The Dubai Mall is part of the United Pharmacies Group, which runs a chain of pharmacies in Dubai and the larger UAE.

Boots Pharmacy: has presence in Dubai; a British company that provides dedicated pharmaceutical and medical services in more than 12 countries around the world.



Planet Pharmacy: is one of the largest pharmacies in Dubai and UAE as a whole, with over 30 outlets in the region.

Courtesy: Dubai Shops, Pharmacies. Available at: <http://www.dubaishops.ae/pharmacies/> (Accessed on 16-3-2015).

Dubai Healthcare City

Dubai Healthcare City (DHCC) was launched in 2002 by the UAE Vice President, Prime Minister and Ruler of Dubai, His Highness Sheikh Mohammed Bin Rashid Al Maktoum, to meet the demand for high-quality, patient-centred healthcare. Today, DHCC is home to two hospitals, over 120 outpatient medical centres and diagnostic laboratories with over 4000 licensed professionals occupying 4.1 million square feet in the heart of Dubai. DHCC combines the leading expertise of medical institutions and pre-eminent healthcare providers to deliver the A-Z of medical services.

DHCC is investing heavily in its education offering with an ultimate goal to provide medical education and CPD programs across the spectrum of healthcare profession, embedded in a culture of research and inquiry.



Through strategic partnerships with renowned academic institutions and medical boards, DHCC's Education division is set to be at the forefront of improving educational opportunities that will allow health professionals in the region to gain access to high-quality programs in the fields of medicine, nursing and allied health, helping to build a sustainable healthcare workforce and specialized medical talent pool in the region.

Courtesy: Dubai Healthcare City, Overview, Available at: <http://www.dhcc.ae/Portal/en/about-us/overview.aspx> (Accessed on 16-03-2015).

Community Pharmacy Practice in Egypt



Educational requirements:

Although the largest sector of work field for pharmacists after graduation is community pharmacy, there is no special educational requirement for pharmacy graduate to work as a community pharmacist in Egypt. There are four basic spheres for any person who desires to be an Egyptian community pharmacist. The first sphere is to master the pharmaceutical sciences by acquiring the needed knowledge and intellectual capabilities.

This can be gained through undergraduate pharmacy degree courses available at present in 17 governmental universities: Assiut University, Bani Swaif University, Cairo University, Damhour University, Helwan University, Kafr El Shiekh University, El Mansoura university, Tanta University, Alexandria University, El Zakazek University, El Menia University, Ein Shams University, El Azhar University, Suez Canal University and El Delta University, in addition to, 13 private pharmacy colleges that were constructed recently. Nevertheless, Pharmacy schools of the Egyptian universities began developing curricula to educate undergraduate students to offer patient oriented services ,Alexandria university has been the first pioneer to implement postgraduate degrees in pharmacy practice since 2002.

Pharmacy, as a solid science profession, was almost relying on its pharmacological, chemical, and pharmaceutical scientific knowledge parts since old ages. Appearance of higher patients 'expectations and development of the discipline of social and administrative pharmacy as a concept and applying it to reality brought to pharmacy practice several rounds of professional metamorphosis. As a result, pharmacy practice has been advancing in different countries.

Over the last 20 years, Pharmacists' role has transformed from product orientation services into patient centred services in many parts of the world, but there are still little successful trials for pharmacy practice change in Egypt .Within the context of practice change, most of the times there is a need for the pharmacist to interact with patients and their health service provider for optimizing the delivery of pharmaceutical care services.

In order to effectively perform this role, other than strong knowledge in pharmacotherapy, a new of generation pharmacists is growing who equip themselves in fields such as sociology, management, pharmacoconomics and psychology, to be given the opportunities in their workplaces to make a change and urging to have the rules form the pharmacy authorities to frame the practice change.

The second sphere is the presence of a national association representing all pharmacy practitioners which is the Egyptian Syndicate of pharmacists having the role of giving pharmacists licenses for practice on annual basis. Even though, there are great efforts done by the Syndicate to put the cornerstones of continuing pharmacy education and professional development, only fees are needed for the annual renewal of pharmacy practitioner license. The Syndicate plays other roles in pharmacy fields such as promoting pharmacy practice, protecting the interests of its members and end-users, and encouraging the advancement of the pharmaceutical science through 27 branches situated in each governorate all over Egypt.

The third sphere relates to the professional code of conduct and ethics which guides all pharmacy practitioners. In fifties, MOH issued a guide booklet about the “Professional Code of Conduct for Primary Healthcare Staff” contained detailed information about the definition of ethics for pharmacy practitioners. Most of the information provided was stated in the Egyptian federal law number 127 of 1955 for pharmacy practice. The fourth sphere of a learned profession is the stipulation by its practitioners of uniform professional services and advice to the patients. This includes supplying medicines to public, in addition to providing appropriate advice to patients during the dispensing and counselling process which are the struggles of community of pharmacists due to some barriers that will be discussed later.



Infrastructural requirements:

In Egypt, conditions are totally different from other countries to have a pharmacy licensed by law, it is independent on the number of patients it serves, and it depends on the distance between close pharmacies. A pharmacy should be at least 100 meters far from the nearest pharmacy. One of the important conditions to get a license for the pharmacy is that one sixth of the whole pharmacy should be present for aeration. A stainless or porcelain basin with one meter long marble shelf sticking to it must be present as another condition for pharmacy license. The least permitted area for a community pharmacy is 25 m² and 2.7 meters for height. The community pharmacy should be directly linked to the street. Nevertheless, any Egyptian who fulfils the conditions stated by the law can own a pharmacy but only a pharmacist who has passed one year of practice can manage and operate a pharmacy.

Services offered:

Although there are great efforts from the Egyptian Syndicate of pharmacists to educate pharmacists and prepare them for patient oriented services, there are very few trial from individual pharmacies to offer patient oriented services and pharmaceutical care. Chain pharmacies have developed E-services for patients through software applications on smartphones and patient advice hotlines. Despite the fact that the competition on the market is very high, demanding actors to be innovative for new services and concepts, as well as differentiating them on the market, health and wellness are central objectives for all actors, including medicines optimization.

It remains an ethical issue for pharmacists to apply generic substitution at pharmacies which substitute prescription medicines included in the high-cost threshold whenever lower-cost medicines with the same formula exist. This case is encountered by large resistance for the physician sectors as commercial deals are widespread in Egypt between pharmaceutical companies representatives and the well-known physicians.

The Egyptian syndicate is exerting large effort to apply the concept of generic substitution as authority given to pharmacists, to be stated by law. In Egypt, there is no national electronic system for prescription transmission between physicians and pharmacies except inside closed institutions e.g: governmental, private hospitals and primary care units. Community pharmacies are highly affordable and accessible healthcare hubs, offering their medical expertise at no cost and without an appointment especially in rural areas and poor districts. This conveys no burden on Egyptian economy as pharmacists are not paid for offering patient oriented services as replying to patients' requests.

On the other hand, there are some barriers to pharmacy services such as the lack of time, shortage of staff inside the pharmacy, lack of patient demand and acceptance, lack of appropriate knowledge and skills by pharmacists, lack of financial reward from services, underestimation to enhanced pharmacy services by physicians, and legal regulatory constraints. More studies are pointed toward the need to standardizing the basic knowledge and skills of registered pharmacists in Egypt. In fact, no examinations needed after graduation that can judge the pharmacists' real strengths and abilities, to obtain and renew pharmacy license.

Regulation and number of pharmacies

According to the most recent statistics, the number of community pharmacies registered in the MOH has reached 73369. Even though 160000 Egyptians are pharmacy practitioners, most of the community pharmacies are operated by non-pharmacists due to lack of pharmacists' desire to work as community pharmacists and their decreased salaries compared to other fields of pharmacy work. The Egyptian law for pharmacy practice has about 100 articles, of which 20 articles are regulating the work in community pharmacies. An example is the regulation which restricted the sale of most of medicines without a prescription. In actuality, strict observance to the law only applies to some medicines like narcotics or any medicine that can cause dependence

Special campaigns

In addition to public health campaigns that are sponsored and carried out by pharmaceutical companies as a part of their promotional and educational sectors through community pharmacies and conferences. Sanofi Aventis made a contract with the Egyptian Syndicate of pharmacists to hold a special campaigns for shifting pharmacy practice and changing the attitude of community pharmacists for better patient oriented services and pharmaceutical care. The campaign is called (Qualified pharmacy and pharmacist) which started in 2013 and covered over 10 governorates.

Community pharmacies all over Egypt are invited to join the campaign programme. This campaign offers educational programme, quality criteria for community pharmacies, pharmacists and quality signs to be hanged on the front side of the pharmacies for patients to trust these qualified pharmacies and the personnel working inside. There is a great hope that the underestimation to community pharmacy profession's importance by other medical practitioners, public, and media which sometimes frames the pharmacist as a medicine seller or a business person, will disappear as result of these steps towards community pharmacy paradigm shift in Egypt.

Community Pharmacy Practice in England



The word 'pharmacist' was first used in a publication in England in 1834 according to the Oxford English Dictionary in a novel by Lytton called *The Last Days of Pompeii*. However, it was certainly in use from the 18th century with the meaning of someone who prepared and dispensed medicines. Nevertheless, at the beginning of the 19th century most people working in this area would have called themselves chemists and/or druggists. The terms pharmacist and pharmaceutical chemist (now usually shortened to chemist) came later in the 1800s.

The word "pharmacy" has a much longer history in England. Chaucer in *The Knight's Tale* (written around 1386) uses the word to describe a medical preparation of plants "farmacies of herbs."

In the early 1800s, an Association was formed to put together a proposal to Parliament to set up a body that examined and regulated apothecaries, surgeon-apothecaries, midwives and dispensing chemists. The chemists and druggists took action, arguing that they were best placed to set their own standards, as they were more experienced in making up prescriptions and making medicines than the apothecaries, so they should not be put under their control. The chemists and druggists won their argument, and when the Apothecaries Act of 1815 was finally created, the apothecaries did not have control over making medicines.

In 1841, a group of chemists and druggists convened a public meeting in London to discuss a proposed medical reform bill. Although this bill failed at its second reading, the trade felt vulnerable. It was unregulated and unrestricted. Anyone could operate under the title of Chemist and/or Druggist.

Jacob Bell, the son of a Quaker pharmacist John Bell, emerged as a spokesman for those concerned. The group agreed that the best foundation for a permanent independent association was membership based on a recognised qualification. William Allen proposed the formation of the Pharmaceutical Society at a meeting on April 15th 1841 at the Crown and Anchor Tavern on the corner of Arundel Street and the Strand in London. John Bell seconded it. Allen went on to become the Society's first president. A committee of forty was appointed as the first Council to frame laws and regulations. It served until elections in May 1842, when a Council of 21 members was formed.

Fast forward to the present day and the Society is still an independent professional body but now does not regulate the profession. Community Pharmacists are widening their role with more services being provided to the public from community pharmacy.

Community pharmacies in England

There were 11,674 community pharmacies in England as at 31 March 2015, compared to 11,647 as at 31 March 2014, an increase of 27 (0.2 per cent). There has been an increase of 1,802 (18.3 per cent) since 2005/06. Most prescription items are dispensed by community pharmacies. In England in 2014/15 978.3 million items were dispensed by community pharmacies (92.1 per cent of all items dispensed in the community).

This is an increase of 30.1 million (3.2 per cent) from 2013/14 when the figure was 948.2 million. This compares with 85.0 million items dispensed by doctor dispensing practices and 7.8 million by appliance contractors in 2014/15. 14.7 percent of items dispensed by community pharmacies and appliance contractors were via the Electronic Prescription Service.

There were 124 appliance contractors on the pharmaceutical list as at 31 March 2015, 122 of which were actively dispensing between 1 April 2014 and 31 March 2015. Since 2005/06 this is a decrease of 17 appliance contractors actively dispensing but an increase of 4.6 million items dispensed.

In 2014/15, community pharmacies and appliance contractors provided the following Advanced Services:

1. Medicine Use Reviews: 3.2 million provided by 10,916 community pharmacies
2. New Medicines Services: 775,998 provided by 9,308 community pharmacies

Community pharmacies are situated in high street locations, in neighbourhood centres, in supermarkets and in the heart of the most deprived communities. Many are open long hours when other healthcare professionals are unavailable. There are several different types and sizes of community pharmacies, ranging from the large chains with shops on every High Street or in edge of town supermarkets, to small individually owned pharmacies in small communities, in the suburbs and often in deprived areas or rural settings.

The traditional role of the community pharmacist as the healthcare professional who dispenses prescriptions written by doctors has changed. In recent years community pharmacists have been developing clinical services in addition to the traditional dispensing role to allow better integration and team working with the rest of the NHS.

What services do pharmacies offer in England?

All pharmacies provide the following services:

1. dispensing
2. repeat dispensing
3. disposal of unwanted or out-of-date medicines
4. advice on treatment of minor conditions and healthy living

Other services that may be available from local pharmacies

- Medicines Use Reviews
- New Medicine Service
- Advice on alcohol consumption
- Carer support
- Chlamydia screening and treatment service
- Condom supply service
- Emergency hormonal contraception (EHC) service
- Emergency supply of prescription medicines
- Independent prescribing by pharmacists – some pharmacists can now prescribe prescription-only medicines for certain medical conditions
- Minor ailment service
- Needle and syringe exchange service
- NHS Health Check (blood pressure, cholesterol or blood glucose testing)
- Pregnancy testing
- Stop smoking service
- Stop smoking voucher service
- Supervised consumption of prescribed medicines
- Weight management service



New developments in England include:

Community Pharmacists access to the Summary Care Record.

NHS England has commissioned the implementation of Summary Care Records (SCR) in community pharmacy, the RPS believes it is important that pharmacists are able to use the SCR efficiently to optimise patient care, particularly with the increasing demands on the wider healthcare system.

What is a summary care record?

The Summary Care Record (SCR) is a 'read only' electronic patient summary containing key clinical information. It has been created with information held by a patient's GP practice and is updated whenever there is relevant change.

As a minimum the SCR contains:

1. Medicines: Acute, repeat and discontinued repeat items (discontinued items will be dependent upon the GP system which created it)
2. Allergies
3. Adverse reactions

Other information may also be available on a SCR, such as diagnoses, test results etc.

When do pharmacists use the SCR?

When dispensing an emergency supply (at the request of the patient) to verify the name, form, strength and dose of medicine previously had by the patient

- Times when you would want to ask the GP practice for medicines/allergies/ adverse reaction information
- Supporting self-care for public health services and promoting healthy lifestyles
- During a medicines use review (MUR) to verify and compare medicines currently being prescribed and their allergy status, where this is not already known
- For provision of the New Medicine Service (NMS)
- When supplying medicines under a locally commissioned service, e.g. supply of medicines on NHS Patient Group Direction (PGD), during minor ailments.

What are the benefits of the SCR in practice?

Patient safety:

1. Reducing prescribing errors
2. Reducing patient harm and therefore reducing hospital admissions
3. Ensuring medication that is clinically appropriate is given to the patient
4. Better understanding of patient health

Efficiency:

1. Reducing the number and duration of phone calls to the prescriber
2. Reducing assessment time
3. Being able to access required clinical information instantly
4. Reduces the number of faxes for communicating information

Effectiveness:

1. Reducing patients need to visit another care setting
2. Supply provided sooner
3. Enhancing customer loyalty
4. Improving advice given about medication
5. Increasing confidence in the profession
6. Improving patient convenience
7. Supporting seven day services

Flu vaccinations from Community pharmacy in England

In 2015, flu vaccinations were made available on the NHS from community pharmacy to help protect adults and children at risk of flu and its complications. Flu vaccines are available free of charge through the NHS in certain people, such as: anyone aged 65 and over; pregnant women; adults with an underlying health condition.



Community pharmacies now offer flu vaccination to adults (but not children) at risk of flu including pregnant women, people aged 65 and over, people with long-term health conditions and carers.

Do pharmacists need additional training to provide these services?

You have to be accredited to undertake most additional services. This is now tends to be done by the pharmacist completing a self-declaration of competency for each service. Within this declaration usually the pharmacist will need to show they have completed recognised training courses.

Undergraduate education reforms

The Government and its agencies have said that a five year science based, clinically focused degree, will be introduced as part of modernising pharmacy education. This proposed reformed education pathway identifies the way forward as combining two six month integrated work based learning and clinical teaching placements with an the academic framework. Under the proposal, the supporting infrastructure would include a quality management approach to the placements, aligned to the experience of the medical and dental profession and a national single recruitment and allocation process for the placements.

As part of the next stage, in addition to considering the five year degree, the Government is looking at the pre-registration pharmacy year in its current format. This will involve developing proposals to introduce an enhanced workplace based education infrastructure to support delivery of the pre-registration year in its current format.

Change to continuous professional development

Continuing professional development (CPD) is a process of continuing learning and development throughout the life of a professional practicing in the UK. It enables pharmacists and pharmacy technicians to develop in their roles and demonstrate that they are competent in their area(s) of practice. It is not just about participating in continuing education, but an ongoing process.

All pharmacists and pharmacy technicians must undertake and record CPD as a condition of their registration with the General Pharmaceutical Council (GPhC). Of reflection, planning, action and evaluation. The requirements for CPD are changing as the General Pharmaceutical Council (GPhC) have been reviewing the process for Continuing Fitness to Practise (CFTP) which includes CPD.

What could the new CPD system look like?

We expect the new CPD system to:

- include an element of peer review related to 'scope of practice'
- align to existing professional development programmes (such as the RPS CPD programmes)
- require between 6-12 entries including evidence of impact
- use a continuous/spot-check model for assessment and NOT a fixed point (5 year cycle) assessment

The RPS is producing guidance and support for members around the new requirements using out post graduate credentialing process, the RPS Faculty.



Community Pharmacies in Finland



There are altogether 812 community pharmacy outlets in Finland. There is at least one pharmacy in almost every municipality.

The running of a pharmacy in Finland requires a licence, which is granted by the Finnish Medicines Agency (Fimea). When a pharmacy licence becomes vacant, Fimea announces that it can be applied for, and grants that licence line with the criteria defined in the Medicines Act.

Fimea also makes decisions based on an assessment of needs regarding the establishment of new pharmacies and subsidiary pharmacies. A new pharmacy or a subsidiary pharmacy is often established on the initiative of a municipality.

A proprietary pharmacist is permitted to hold only one pharmacy licence and a maximum of three subsidiary pharmacy licenses at one time. Pharmacy chains are prohibited in Finland.

A pharmacy licence is granted to a specified individual and it may not be sold on or leased out, nor may the licence obligations be transferred to a third party. The proprietary pharmacist has both professional and financial responsibilities for her/his pharmacy. The pharmacy licence is terminated when the proprietary pharmacist reaches 68 years. Several duties are attached to the pharmacy licence, the most important being to ensure the availability of medicines.

Economic matters

In Finland, retail prices of medicines are the same in all community pharmacies. The council of state decides the medicine tariff, which sets a retail price of a medicine according to a national wholesale price. Hence, a pharmacy never decides the price of a medicine; it is decided by pharmaceutical industry and the state. Regulation of the medicine price ensures the reasonableness of medicine prices and equal treatment of citizens throughout the country.

Pharmacies pay a pharmacy tax to the state. The amount of the tax basis on a table decided by Parliament each year. The tax is based on the turnover of the sales of prescription and non-prescription medicines, and it is progressive. In practice, the pharmacy tax cuts particularly the incomes of large pharmacies and thus adjusts the financial result of pharmacies of different sizes. The effect of the tax is that a small pharmacy will earn proportionally more from the sale of the same medicine than a large pharmacy. The smallest pharmacies are exempt from the pharmacy tax; for the larger pharmacies, the tax is over 10 percent of the turnover from the sales of medicines.



Pharmaceutical care and services

Pharmacies employ almost 8500 professionals. Some 60 % of them are pharmacists (M.Sc.) and assistant pharmacists (B.Sc.) who have received university education.

In Finland, pharmacies have a law-based duty to give advice and counselling. According to many studies, pharmacies are very trusted and the Finns are very satisfied with the service of community pharmacies.

Pharmacy is the most frequently used health care service in Finland with appx. 60 million visits every year. Pharmacies play an important role in Finnish healthcare by providing advice and counselling. According to a recent survey, counselling provided in community pharmacies saves almost one billion euros in overall healthcare each year. Most of the savings are related to counselling in self-care and minor ailments.

Finnish pharmacies offer many services including Public Health Programmes (asthma, diabetes and heart health). The aim of the programmes is to ascertain appropriate treatment and optimal treatment outcomes and support patients' self-care.

One service is medication review. Its aim is to improve rational and safe pharmacotherapy and primary target group is aged patients with polypharmacy. The review includes medication reconciliation, discussion on findings and concerns and a written summary to share with GP. Automated dose dispensing is a service, which improves medication safety and decreases medicine waste.

In automated dose dispensing, tablets and capsules are dispensed in doses by a dose dispensing machine and the dose pouches are labelled. The labelling includes at least the patient's identity (name and date of birth), dose dispensing date and time, name and dose of the medicinal products, and name of the pharmacy.



Some pharmacies have Pharmacy's Health Point. They offer easily accessible health care services in close collaboration with public healthcare. Services are given by nurse. Services are small-scale measures, such as vaccination, suture removal, rinse the ears, mite removal, as well as measurements such as cholesterol, blood glucose, blood pressure, haemoglobin, and bone density. Possibility also to provide remote doctoral appointments via internet.



Community Pharmacy Practice in Germany



With about 20,023 community pharmacies and a population of more than 80 million, Germany has a pharmacy density of 24 pharmacies per 100,000 inhabitants. The country's pharmacy density comes in just below the average of all European Union (EU) member states. The average of all European states is 31 (!). There are more than 60,000 registered pharmacists in Germany, of which almost 50,000 are owners or employees of community pharmacies.

The number of female pharmacists is noticeable: Two thirds of all pharmacists in Germany are women; community pharmacies even hold a share of more than 70 per cent. In order to train pharmacists, 22 universities in Germany offer five-year study programmes. Roughly speaking, the academic education is highly government-regulated and consists of three parts: two years of natural sciences, two years of pharmaceutical and clinical studies and a year of work experience in community pharmacies and elsewhere.

In Germany, only pharmacists may operate a pharmacy. This principle guarantees the proper pharmaceutical supply of the population. The ban on third-party and multiple ownership stresses the personal responsibility and liability of self-employed pharmacists in the healthcare sector.

It separates the pharmaceutical supply from companies' exclusive intention to maximize return. In 2009 the European Court of Justice confirmed that the ban on third-party ownership in Germany is an acceptable and effective tool of customer protection. In fact, the ban is a means of preventive consumer protection which is permitted for the healthcare systems of the EU member states by article 152 of the EC Treaty. If third-party and multiple ownership became legal, the supply of pharmaceutical drugs would become dependent on purely commercial interests. Furthermore, oligopolies in the form of pharmacy chains that are subject to the financial aims of their shareholders would not generate any economic savings. With the freedom of establishment, Germany has a more liberal system than many other EU member states where the number of pharmacies is limited by the respective governments.



Several other instruments of consumer protection are applied in Germany. First, all prescription drugs have the same price in every pharmacy across the country. This ensures that people have easy access to pharmacy-services wherever they live, day and night.

Germany's Drug Price Regulation defines the price components of all prescription drugs – from the producer via the wholesaler to the pharmacy. There is still fierce competition amongst the pharmacies – not for the price but for quality and service. Second, over-the-counter (OTC) drugs may only be sold by a licensed pharmacy under the supervision of a pharmacist as a qualified health professional. More than one third of all drugs distributed by pharmacies are non-prescription drugs. For many people, self-medication is a means of avoiding a doctor's consultation in case of minor illnesses.

The price of OTC drugs, which must be paid in full by the customer, can differ from pharmacy to pharmacy. Third, German pharmacists have launched own initiatives of improving consumer protection. One important project is to introduce a comprehensive medication management which would allow community pharmacies to monitor prescriptions and self-medication of their patients. A joint concept by pharmacists and doctors is currently being implemented at a regional level - in cooperation with a health insurance company and for the benefit of patients with chronic diseases.

For some years, so-called discount contracts between health insurance companies and drug manufacturers have led to a dynamic development within the pharmaceutical market in Germany. By agreeing on a discount contract, a drug manufacturer promises to a health insurance company that a discount on the list price will be given for a single drug or an assortment of drugs. In turn, the health insurance company agrees with the manufacturer that all of their insureds will normally receive these drugs to which the contract applies. The duration of the contract would usually be two years. However, some contract information is kept secret, e.g. the exact amount that is saved by the discounts. If a doctor prescribes an agent or if he allows the exchange of a prescribed drug, the pharmacist is obliged to dispense the discounted drug that is set by the respective health insurance company.

For the community pharmacists, these discounted drugs create considerable additional work, for instance in matters of consultation. Basically, Germany's pharmacists support the discount contracts but remind all involved parties that patients and pharmacists must be informed in time and that all required drugs must be able to be delivered at any time



Community Pharmacy Practice in Hong Kong



In Hong Kong, Community pharmacy is the general term used to refer to the pharmacy services provided in the retail sector.

Community pharmacy is currently the largest sector of pharmacy practice in Hong Kong. There are about 650 community pharmacies, including both chain and independent pharmacy, providing dispensing services, patient counselling, and sale of over-the-counter medicines. In Hong Kong, there is currently close to 3,000 registered pharmacists Practising in the community, hospital, industry, government, academia, and other sectors.

In Hong Kong, there is no Separation of Prescribing and Dispensing. Thus, both doctors and pharmacists can dispense medicines to their patients in the community. Over 95% of the Hong Kong public receive care at the public hospital system (named the Hospital Authority) and provide dispensing services of medicines to out-patients living community but most of the dispensing of "Self-finance items" that are not paid for by the government are dispensed at community pharmacies.

The costs of drugs used by Hospital Authority Patients totaled HKD \$ 5710 million (USD \$732 million) which accounts for about 10% of all Hospital Authority expenditure of HKD\$ 59 billion (USD \$ 7.56 billion) in 2015-2016.

Recently, the government issued a report highlighting concerns of potential drug wastage situations in the public hospitals due to provision of high volumes of medications for long periods of time to patients in out-patient setting.

The government report indicated that specialist out-patients of public hospitals received prescriptions in 2015-2016 for a length of an average of 84.2 days which is an increase of 7.8 (10.2%) days from the average prescription length of 76.4 days in previous years of 2011-2012.

The report further highlighted that from overseas experiences that if large quantities of drugs are provided for long periods of time, the drugs may be unused and wasted.

The pharmacy profession in Hong Kong sees the need for the community to join hands to address the problems arising from the current supply of large quantities of drugs for long periods of time by the government hospitals to out-patients.

Large amounts of medicines supplied to patients which become unused may cause a number of serious problems to society. Firstly, unused medicines may result from patients that have medication adherence difficulties and fail to use the medicines prescribed. If patients adherence problems are undetected for long periods of time and they fail to take their medication therapy correctly, the patient's health condition may be at risk and may lead to incurring more medical costs and hospital readmission. Secondly, the costs of the medicines which have been unused wastes financial resources and becomes a heavy financial burden for the government in the long term. Thirdly, the costs of proper disposal of medicines by the environmental department for unused drugs becomes an expensive cost to the community in the long term.

Finally, if patients do not dispose of their medicines properly to the environmental department, the large volumes of unused drugs would pollute our environment and cause harm to humans, animals, and other living organisms in the habitat.

Pharmacists in the community have been providing services which assist patients to better manage their medications through our "Hong Kong Medication Check Up and Clean Up (MCUCU) Program. The service may be conducted at designated community pharmacies, in patients homes, or old age homes.

The Hong Kong MCUCU Program has 5 objectives :

1. To regularly screen patients for any stock of unused medicines due to reasons of drug product expiry , medication no longer needed, or medication non-adherence issues.
2. To provide education to patients on how to better use their medicines and avoid wastage.
3. To make referrals for follow up healthcare services if needed.
4. To collect and dispose properly of unwanted medicines of patients through the environmental department.
5. To regularly report to the government of our findings on trends of medication non-use by patients leading to drug wastage

The pharmacists participating in the program are provided with certification training to conduct the MCUCU service in a high quality and consistent way and are continuously monitored through our service quality assurance program.

Community Pharmacy Practice in India



India is the 2nd most populated nation (1.324 billion in 2016) with 29 states and 7 union territories, with 22 nationally recognized languages. Healthcare has become one of India's largest sectors both in terms of revenue and employment. The industry is growing at a tremendous pace owing to its strengthening coverage, services and increasing expenditure by public as well private players. During 2008-20, the market is expected to record a CAGR of 16.5 per cent. The total industry size is expected to touch USD160 billion by 2017 & USD280 billion by 2020.

India has a rich tradition of Ayurveda, which evolved around 5000 years ago and had been the main stay of therapy, and more seen as a way of life. With the advent of the era of modern medicines, there was a decline in the traditional practices. The Government of India gave a boost to traditional therapies by rooting to Department of AYUSH (www.ayush.gov.in).

History of Pharmacy in India

The genesis of community pharmacy practice in India can be traced back to British India, when the profession was only business oriented and the professionals were called as either drug sellers or drug dispensers. Scotch M. Bathgate opened first chemist shop in Kolkata in 1811; the starting point of the pharmacy practice in India. Pharmacy education under British ruled India had first begun in Madras Medical School in December 1860 – a 2 years course.

In Goa, which was under Portuguese rule, Escola Medico started a combined course in medicine and pharmacy in 1842. The Indian Pharmacopeia was first published in 1868. The official Indian Journal of Pharmacy was first released in 1939.

The pharmacy practice scenario and especially community pharmacy practice during pre-independence era was highly unregulated and there were no restrictions on the practice of pharmacy in India. The standardization of pharmacy education was introduced in 1945. The Indian Pharmaceutical Congress Association had its first annual conference in 1948. The Pharmaceutical Association was the first pharmaceutical society of India started in 1923 and was renamed as The Pharmaceutical Society of India after 2 years.

In 1932, pharmacy education was started at Banaras Hindu University, and introduced a Bachelor's of Pharmaceutical Chemistry and was first university to start a 3-year bachelors program in pharmacy. In 2008, Pharm.D (Doctor of Pharmacy) 6 year program has been introduced by PCI (Pharmacy Council of India).

The minimum qualification required to practice pharmacy is a Diploma in Pharmacy. A pharmacist's presence is legally required during the dispensing and selling of medicines. There is no pharmacist licensure pre-reg exam in India. Anyone who has the minimum qualification (D.Pharm) and above can apply for registration as a pharmacist.

Community Pharmacies

There are around 6,50,000 retail pharmacies in the country. Most of them are concentrated in the urban population. Those which have compounding facilities are permitted to use the term "pharmacy" against their name, whilst the others are permitted to be called either a "chemist and druggist" or "medical store".

For all of them, however, it is mandatory that a pharmacist be always present at the store, and prescriptions and prescription medicines be dispensed only by or under a pharmacist's supervision. Unfortunately, in many of them a pharmacist is not present all the times.

A large majority of the medical stores/pharmacies belong to independents (majority of which are non-pharmacist owners). In the last 10 years, some Indian chains have emerged, and they own around 6000 medical stores/pharmacies. Their air-conditioned, smart look, and offering of discounts and facilities gives a tough competition to the independents. Some of the chain pharmacies are Apollo pharmacies, Medplus, Hetero, Guardian pharmacies, Wellness Forever, etc.

In the past 2 years several online pharmacies have been setup in the country inspite of there being no regulation/legal provision in the law for the same. They are posing tough competition to the independents with their offerings of huge discounts, door delivery, etc. Protests by the independents to the government against online pharmacies have not drawn much result.

The concept and art of compounding prescriptions has almost been wiped over the past 3 decades with no more than 1% prescriptions likely to be compounded today. The community (retail) pharmacy sector is the prime source of medicines for both ambulatory and hospitalized patients.

The medicines manufactured by pharmaceutical companies are made available to the community pharmacies through their clearing and forwarding agents and around 80% patients pay their own medicine bills whereas the government caters to around 20% of patients. Though the government hospitals offer free medicines, the stock isn't always available, thus forcing patients to purchase the medicines from private retail pharmacies. Almost 90% plus sales of medicines at community pharmacies are non-generic (thousands of brands are available) resulting in ambiguity and also difficult to maintain the inventory.

There are more than a million pharmacists in the country, and a large number of them work in the industry. Besides the majority who work in community pharmacies, many work as hospital pharmacists, as Medical Representatives and as faculty in the 1500+ pharmacy colleges in the country.

A typical Community Pharmacy setup

By law, the minimum area required for a medical store is 10sq m. The area of most of the pharmacies in India is below 20sq m and rarely above 50sq m. Many medical stores are open for long hours (due to intense competition) often from 8AM to 12 midnight. There are 24x7 pharmacies too, especially in big towns. There are no laws relating to minimum distance between 2 pharmacies, or number of pharmacies with respect to population. So very often, there is large crowding of medical stores in large towns and near hospitals, and scarcity in rural pockets. Many hospitals have their own pharmacy which sells medicines to their patients just like a community pharmacy.



The problems faced by community pharmacies are

1. Inadequate incentives and profit margin – Varies 12-20%.
2. Overcrowding of pharmacies in urban and semi-urban areas – the overcrowding of community pharmacies in same locality is a reason for unhealthy competition and non-development of professional concepts in the practice area. Whereas in rural areas, the pharmacies are much lesser, or not there.
3. Anyone can open a pharmacy. It is not the exclusive domain of the pharmacist.
4. Professional fee – at present in India, there is no practice of charging professional fee for dispensing prescriptions.
5. Too many “me-too” brands in the market. India has many drugs and FDCs in the market, and more than 1,00,000 brands. Lack of implementation of drug laws –pharmacist is often not present when dispensing takes place, and prescription medicines are also available without a proper prescription.

Role of Indian Pharmaceutical Association

Earlier, the public perception of community pharmacy and the pharmacist was very weak. The general population considers community pharmacists as drug traders. But gradually the community pharmacy is awakening with the steady efforts of Indian Pharmaceutical Association (IPA) and many other organizations and eminent pharma professionals.

IPA has adopted Good Pharmacy Practice Guidelines and followed it up with a Training Manual for Community Pharmacists with support from the WHO – India Country Office and the Drugs Controller General of India in 2005. IPA also had a pilot project on accreditation of retail pharmacies, again a first of its kind initiative. Engaging pharmacists in Revised National TB Control Programme (RNTCP) is another innovative work. This public private partnership (PPP) is well established now in Mumbai. This project of IPA Community Pharmacy Division (CPD) is in collaboration with RNTCP, MSCDA, SEARPharm Forum and is supported by Lilly MDR TB Partnership.

IPA – CPD followed up with Central TB Division (CTD), Ministry of Health, Government of India (GoI) for national expansion of this initiative and in April, 2012 CTD has signed a MoU with IPA, AIOCD, SEARPharm Forum & PCI for inclusion of pharmacies in RNTCP at a national level. IPA's work and advocacy for pharmacist's role acted as an agent of change and contributed to the policy change. It was a historic development for the pharmacy profession and marks the first time entry of pharmacists in a National Health Programme. This pharmacist PPP model was also recognised by WHO.

We're gradually seeing positive changes to an extent in certain pharmacies – pharmaceutical care services have been initiated, including educating patients for dosage, use of devices such as inhaler techniques, measurement of height-weight-BMI, blood pressure, blood sugar checks and use of patient leaflets and dosage stickers. There have been improvements in computerization and infrastructure with growth in patient counselling areas.



Despite many barriers, community pharmacy services are central to the safe and effective medicines management in advancing health. With rapidly occurring changes in the health care delivery and growing patient expectations, it is hoped that community pharmacy practice will change accordingly.

The Challenging Era for Community Pharmacies in Indonesia



Indonesia, whose population is around 240.000.000 people, is going to have significant changes in healthcare services. Starting in early 2014, Government of Indonesia plans to implement a universal health coverage programme to protect all citizens. The implementation would be executed step by step since 2014 until 2019. For the first step, people who work for the government and army who were formerly covered by state's own insurance company would automatically be a part of the programme. The second step, for the poor people, government would take care of the premium. The numbers in both categories is approximately 130.000.000 people. The rest of the population (approximately 110.000.000 people) would be covered by the programme after 2019.

The new universal health coverage programme entails a collaboration between healthcare professionals. With limited resources, the optimum result of therapy could only be reached by good teamwork among them. Patients must be taken care of by doctors, pharmacists, and nurses. Although this phenomenon is expected to be of common practice, it happens on a very limited scale in a country like Indonesia where there is out-of-pocket system. For the community pharmacists, those changes are very challenging. Although pharmaceutical practices have already been written in the Indonesian Health Law, practically only limited community pharmacists implement number of it. In many pharmacies, community pharmacists are absent in day to day activities in the pharmacy. The pharmacy technician or other pharmacy employees are more well known in society.

Indonesian Pharmacists Association is trying hard to convince every stakeholders regarding the role of community pharmacists in new healthcare services in the universal health coverage era.

Pharmacists must stay together with other healthcare professionals in the clinic or pharmacy to serve patients directly. Some of the important roles must be demonstrated by pharmacists like assuring quality medicine supply, managing polypharmacy, minimizing medication errors, minimizing abuse of antibiotics and maximizing rational use of medicines. Pharmacists play important roles in quality and cost control of medicines. It is not an easy task. From other healthcare professional (especially medical doctor) point of view, they rarely meet pharmacists even in the pharmacy. They don't feel pharmacists contribute to the process of medication. Pharmacists themselves don't really feel confident to do their responsibility as healthcare professionals. There are several reasons such as very few pharmacists who really practice like role models. Lack of practical experience during education and lack of law enforcement resulting in pharmacists getting lazy to practice. But the show must go on. Ready or not, Indonesian Pharmacists Association sees this moment as a golden opportunity for pharmacists to change and demonstrate their real role in the healthcare system by providing direct services to the community to get the optimum positive effects of drugs. Indonesian Pharmacists Association would facilitate its members to increase their competencies through a variety of programmes.



Pharmacies in the Republic of Ireland



The Irish Pharmacy Union (IPU) is the representative and professional body for community pharmacists in the Republic of Ireland. The IPU's sole focus is on protecting, promoting and strengthening the profession now and long into the future, and advising and supporting members in their professional and business lives.

There are 1800 pharmacies in the Republic of Ireland and with a population of only 4.5 million there are 56 pharmacies per 100,000 inhabitants, which is among the highest densities in the European Union (EU). It is not a requirement to be a qualified pharmacist to own a pharmacy but each pharmacy would require a registered pharmacist to be on the premises. 88% of pharmacies are owned by pharmacists with 12% owned by non-pharmacists. Approximately 50% of pharmacy outlets in the Republic of Ireland are single ownership with the other 50% in chain ownership. Pharmacy ownership is dominated by males with seven out of 10 pharmacies in male ownership.

In 2014, 45% of the adult population visited a pharmacy within the past week equating to 85 million pharmacy visits per year, or 19 visits per annum for every man, woman and child in the State. Community pharmacies are generally open to the public on average 56 hours per week, equating to just over nine hours a day on a six day week basis.

Women use pharmacy services more often than men and 54% of women have visited a pharmacy in the past week and 91% in the last month, whereas the numbers of men visiting are 27% and 64% respectively.

The dispensing role of medication remains the core activity of Irish pharmacies with approximately 80% of all revenues generated in this area as opposed to 20% in front-of-pharmacy, which includes over-the-counter medicines, cosmetics and other items. The vast majority of pharmacies dispense items on behalf of the State through the General Medical Services Scheme (GMS) and the Community Drugs Schemes, for which they receive a payment for each item dispensed. Over 75 million prescribed drugs were dispensed to patients under the GMS and Community Drugs Schemes in 2014.

On average, 83% of all items dispensed in a typical pharmacy is through the GMS and Community Drugs Schemes. Due to economic pressures, a significant reduction in the State's health budget and the introduction of Reference Pricing (reduces the reimbursement rates for certain medicines) payments through the State schemes have been severely reduced in the last number of years, which has put financial pressures on many pharmacies.



Although healthcare budgets and State payments for medicines are falling there are increased demands being placed on Irish community pharmacists by an ageing and growing population. With large pharmacy chains expanding their footprint and supermarkets encroaching on traditional pharmacy business, competition has never been more intense. These environmental pressures are pushing pharmacists towards collective purchasing through buying groups and also towards symbol groups. These groups have gained popularity in the last five years as smaller independent pharmacies search for improved procurement margins to counteract the impact of government reimbursed rate cuts. The majorities of pharmacists are members of at least one buying or symbol group.

Even though the pharmacy sector has experienced significant challenges over the last number of years, primarily from reduced incomes and economic uncertainty, this has had no impact on undergraduate enrolments, which have increased by 4% between 2013 and 2014 and a significant 63% since 2004. Interestingly, while the majority of pharmacy owners are male the vast majority (68%) of pharmacy undergraduates are female.

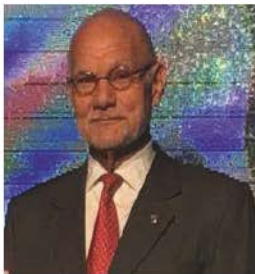
While medicine dispensing remains the core pharmacy activity there is a growing focus on providing healthcare services. Pharmacists are now delivering emergency hormonal contraception, participating in the Needle Exchange Service and are providing an Influenza Vaccination Service and a Smoking Cessation Service. The IPU is actively engaging with the Health Minister and Senior Staff in the Department of Health to further expand the range of services available from community pharmacies including a Minor Ailment Scheme, New Medicine Services, Medicine Use Reviews, Chronic Disease Management and Extended Vaccination services, among others. In the Republic of Ireland there is severe pressure on GP services and hospital emergency departments; expanding the role of community pharmacists is the logical solution to addressing these pressures and will position pharmacy at the centre of community healthcare.

Survey evidence confirms that the perception of pharmacists in Irish society is extremely positive with 96% of the public rating their professionalism and 93% their medical advice as good or very good. Irish patients are supportive of an expansion in the role of pharmacists, with 94% agreeing that they would like to see pharmacists treat minor ailments and offer advice on medicine regimens.

Many challenges remain for Irish pharmacies and the sector is changing from a landscape that was predominated by smaller independent pharmacies towards an ever-growing influence from group chains and supermarkets. With an ageing population and an increase in chronic illnesses the role of community pharmacy will become even more important and independents with their position within communities will need to build a proposition that is uniquely local to ensure that they survive in this competitive arena.



Community Pharmacy Practice in Israel



Israel is a small country the size of Wales (UK) or New Jersey (USA) yet, apart from its' small area (27,000 sq km) and size of population (8 million), it is in many ways similar to India. We have sea and lakes with golden beaches, deserts, mountains, rivers and lush cultivated land. Our people at home speak many different languages (having come from all over the world) but we all speak, read and write the ancient language of Hebrew. The official languages in Israel are Hebrew, Arabic, and English (In India you have some 23 official languages), yet Russian, Spanish, French, German, Romanian and Amharic are also very widely spoken. We are a democracy with a healthy GMP and excellent life expectancy (79.6 Male 83 Female).

Israel has;

1. A health budget of 8 billion US\$ per annum,
2. 10% of health expenditure is on medicines,
3. 9% of Gross National Expenditure goes to health.

Each Israeli spends \$95 on an average per year on medicines. Israel is predominantly a High Tech country and this is well felt in community pharmacy licensing. There is about one pharmacist to every 2300 people. Israel has two pharmacy institutions running bachelors, masters, doctorate, and Pharm.D programmes. The Pharmaceutical Association of Israel is promoting pharmacy profession since 1948. The professional obligations and day to day working of the community pharmacy in Israel are governed by the Ministry of Health and National Health Insurance Law.

All citizens have health insurance and must belong to one of four MCOs (managed care organisations) (or HMOs - Health Maintenance Organisations). Temporary foreign workers must be insured by one of a number of private MCOs. These organizations have their own physicians and each has a number of their own pharmacies. Some have their own hospitals although the patient can always choose his preferred hospital if he wishes.

The "Basket of medicinal services" available for the patients is large and comprehensive but often the medication can only be obtained via a pharmacy belonging to the MCO. The distribution to pharmacies via wholesalers is virtually hermetically sealed, goods arrive with microchips which is checked by the government agencies. so the introduction of counterfeit is almost impossible. The prescriptions are generally sent electronically to the pharmacy, and as such are checked for any drug/drug interaction before it reaches the pharmacy. The pharmacist has to undertake questioning and consultation with the patient to ensure that his way of life or food habits, use of OTC or alternative medication and the prescribed dosage are in order as well as his involvement in the adherence of the patient in understanding about his drug regime and of what to be aware when taking his medication. Failure to do so could lead to prosecution if harm came to the patient and the pharmacist is legally responsible in case of error together with physician.



There is no hierarchy between physician and pharmacist and we enjoy a very good mutual professional relationship despite some changes in law that may bring tension due to fear of “stepping on the other’s toes”. Pharmacies require a license from the Ministry of Health to open and everything from minimum size, layout and design, air conditioners (that must work day and night), refrigeration equipment, cleanliness, positioning of medication (accessibility of the public), pharmaceutical apparatus and the health and conduct of pharmacists are regularly checked. A consultation room is required as is ensuring the privacy of the patient. Violation of requirements can lead to the closure of the pharmacy and suspension of the pharmacist’s license to practice. A business relationship between physician and pharmacist is prohibited.

Pharmacists must be registered with the Ministry of Health who grant the license to practice. The minimum requirement is a Bachelor Degree and internship. Those coming from abroad must also pass a board examination before practicing. Each pharmacy must have a superintendent pharmacist who must be approved by the Ministry. There is to be even stricter legislation regarding the pharmacists’ duties and his counselling the patient, and the conditions within the pharmacy. Pharmacists wishing to compound are subject to even greater demands and legislation and apart from the dilution of (antibiotic) medication, compounding is undertaken predominantly in specialised compounding pharmacies.



Prescriptions received by the pharmacy can be electronic or the patient arrives with a paper prescription which is identified electronically. This prevents duplication of supply and the interactions of medications already on the patient’s “medical” profile. The pharmacist has the possibility of overriding any inter reaction but must be prepared to be accountable for the reason of his action. Prescriptions are retained for future inspection and can be stored either physically or in the “cloud”. Both for the sale of recommended OTC and prescription medication, consultation must be given.

There is shortly to be introduced the “pharmacist prescription” for chronic or emergency supply. Pharmacists will be required to undergo special training and licensing for this.

In conclusion however, not all is as rosy as it may look. Health funds are the “bosses” and both physicians and pharmacists know this. Remuneration is poor and government does very little to improve it. True and effective Pharmaceutical Care therefore is lame amongst many pharmacists. Our work at the Association is to convince government that they and the very public they serve are the losers. Innumerable studies have shown that if the pharmacist does work as he should, we could save enormous amounts in mortality, morbidity, and money. The costs of non-compliance are staggering in every health system, even if they appear great from the outside. We all can save 0.03% of population from unnecessary death and \$960 p.a. in Health Care Systems budgets for each inhabitant of that country (1,2) whilst Pharmacist providers could save Health Care Systems \$4 for every \$1 spent (3). It is in our hands to change this and we shall, not just for ourselves but for future generations.



Community Pharmacy Practice in Japan



Current Status of Community Pharmacy Practice and its Education in Japan First of all, I (kiyomi) shall; briefly introduce Japan. The population of Japan is estimated at 126,999,808 as of July 2014. The population density in Japan is 336 people per Km². Ninety three per cent of the population is urban (117,995,650 people in 2014). The median age in Japan is 46.2 years. It is well known that Japanese average life span is the longest in the world: 80.50 in males and 86.83 in females in 2014.¹

In Japan, in 2006, the education of clinical pharmacy changed from 4 years to 6 years. It means that to become pharmacist, students need to study for 6 years. The objective of the 6 year course was to strengthen the student's ability of clinical knowledge and practical skill when they became pharmacists. As well as that government and educational sector hope to encourage pharmacists' more participation in team activity in medical care both in the hospital and community. Since the 4 year course of pharmacy science has remained, if students only hope to study basic science of pharmacy, they go to the course of 4 years. However, the 4 year course does not allow the student to take the national exam of pharmacy.

In the 6 year clinical pharmacy course, 4th year students take the OSCE (Objective Structured Clinical Examination) and CBT (Computer Based Testing) before they go for practical training in hospital and community pharmacy in the 5th year for 2.5 months each. It is a good opportunity for them to face reality of medical care and community service. After graduating from school, a student has the right to take the national examination, and if s/he passes the examination, s/he becomes a pharmacist.

Around 2006, quite a lot of new pharmacy schools have been opened, thus increasing the number of pharmacy schools. There are 74 pharmacy schools, and every year around 12,000 clinical pharmacy course students graduate from school, and around 70 to 80% of them become pharmacists. The number of pharmacists in Japan is estimated to be 280,052 in total, of which 39% are male and 61% are female. Fifty three percent of pharmacists are working in the community pharmacy (Fig1).² If this includes community clinics, the percentage will increase more. As shown in Fig2³, the total community pharmacy activities are still developing.

Fig1. Pharmacist occupation in Japan

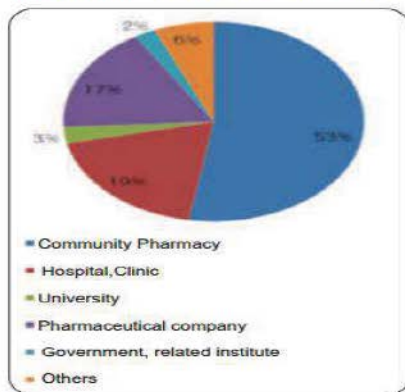
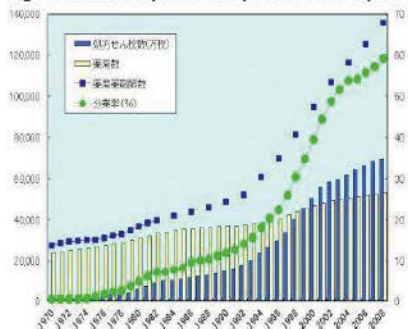


Fig 2: Community Pharmacy Practice in Japan



In the community, there are two major types of pharmacy practice; one is the drug store type which mainly sells OTC and commodity, however it also accepting prescriptions from hospital and clinics as part of works. The other is the prescription pharmacy which mainly accepts prescriptions from hospital and clinics. Usually these pharmacies are located very close to these medical institutions. Actually, there is a lot of this type pharmacy practice in Japan. It is one of the characteristics of Japanese community pharmacy. The good point of this style of pharmacy is that it is quite easy to contact doctors who prescribe for patients, good continuity of patients follow up, and better access from clinic to pharmacy. On the other hand, it is difficult to look after patient's variety of needs such as advice of OTC and food and other medical commodity and devices in an integrated manner.

As for drug store type, patients and users are quite convenient to buy not only drugs but also some other medical commodity, health foods and cosmetics when they need to go a pharmacy with a prescription. With increasing number of elderly, needs for this type of drug stores will increase either in the city or in the local area. From the educational cooperation point of view, about 15% of other types of community pharmacies accept student trainees every year. This contributes to the development of communication between university and community pharmacy. In addition, it creates opportunity for the pharmacist to participate in some research even while they are working in the community. So when some pharmacists become adult graduate students, it could be a good incentive for clinical pharmacy research.



Since the government has encouraged pharmacists' activity in the community, it is gradually expanding the role in the community, such as participation in the medical care team, home visits and delivery including monitoring and reallocation of drugs. However, currently there is no strong incentive for such community service work for pharmacists, and so some pharmacists prefer to only do dispensing work which is well paid. More and more 6 year course graduates are working in the community, and their enthusiasm will develop the pharmacists' role in the community.

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Pharmacy Photos: Tanaka Pharmacy Co., Ltd.6-147, Isezakicho, Naka-ku, Yokohama, Kanagawa, 231-0045, Japan

Pharmacy Profession in Jordan



Modern Jordan; A Country located in the Middle East of “high human development” as classified by the 2010 Human Development Report, was founded in 1921 and recognized by the League of Nations as kingdom having currently a population of more than 8.5 million inhabitants where the average family ranges as 5.4, the growth rate is around 2.3% and the percentage age population is 40 % of those under 15 years .

HEALTH SECTOR: The government and the private sectors provide their health services to 87% of the total population. The former provides its services to 67 % of the insured while the latter caters for the rest 20%. Jordan has been admitted as a WTO member in 2002, Laws and regulations were passed to comply with the Patent Laws and the Intellectual Property Rights; consequently most of the International Pharma Industry does have presence in the Jordanian market. Bolar provision allows Jordanian pharmaceutical manufacturers to be the first mover advantage on expiring patents if they are located in Jordan. In 2017, Jordan was ranked as fifth in the Medical Tourism globally and second in the region. This classification confers with the availability of high caliber of health services such as well-equipped hospitals, highly specialized doctors, advanced medical equipments, well trained health providers, latest innovation in molecules. The availability of original and good quality of medicines have to undergo regulatory registration, testing, pricing and market release by the Official Regulatory Body, Jordan Food & Drug Administration (JFDA).

While the Governmental Sector depends on the tender business in its supplies and purchases seeking low competitive prices of generics emphasizing its policies on providing primary health care, the private sector is more dependent on providing sophisticated services in a highly dynamic and competitive environment.

JORDAN LOCAL PHARMACEUTICAL INDUSTRY (facts & figures): Pharma Industry is present since 1960 accounting currently to twenty one manufacturing companies, having a size of two billions.USD as investment with a total market (local & export) at export price in US Dollars was 883 million while the share of the export share was 750 m / USD as recorded by the Central Bank of Jordan / 2011.

JORDAN is a regional market leader in the Pharma Industry, manufacturing branded generics and exporting to over 70 countries around the world. The pharma industry employs % of the workforce, and its exports comprise over 12 % of total exports. Leading manufacturers own plants around the world and are venturing into BIOTECHNOLOGY where traditionally they manufacture antibiotics, anti-ulcers, hormones, anti-aids, anti cancer etc.

KEY ADVANTAGES TO THE INDUSTRY; two factors are of prime advantages: the cost competitive location for the manufacturing / sales hub with access to a regional health care & pharmaceutical market with 4.5 B/yearly for Saudi Arabia alone. The second key advantage is being a Centre of Excellence for clinical trials where drug trials cost 50% less than in Europe or US. A third added value is the larger skilled labor pool amounting to 8800 direct / indirect employees and a growing pool of students in pharmaceutical degree education. Eleven universities & para medical subjects, 6 clinical research centres with EMEA FDA accreditations.

PHARMACY PROFESSION REGULATIONS

The total number of University's pharmacy faculties is 19 faculties (Private & Public). Referring to Jordan Pharmacists Association (JPA) registrar and as of January, 2018:

1. The total Number of active community pharmacies is 3250 Pharmacy
2. The total Number of active No. of pharmacists is 18260 (6174 Males and 12086 Female)
3. The total no.of Pharmacists working in the govt. sector is roughly around 928 Pharmacists.

PHARMACY PROFESSION in JORDAN is highly regulated and governed by three separate yet integrative official bodies namely :

1. Health Professions & Institutions Licensing Directorate (HPILD): responsible for accreditation and licensing.
2. Jordan Food & Drug Administration (JFDA): responsible for registering , pricing, and market releasing medicines as well as inspecting the pharmaceutical institutions.
3. JPA: is the only body representing the interests of all pharmacists in all professional walks.
4. Higher board for Health (a recent one)

PHARMACY PRACTICE: In compliance with the current laws, every pharmacist has to be a member of the JPA, only a pharmacist can own and manage a pharmacy. Jordan is considered as a hub in the region for pharmacy education where 19 faculties of pharmacy do exist and provide the 5 year plan of education while 2 state universities do offer the PHARM D program. In the last ten years, the market has witnessed a shift in ownership of pharmacies whereby chain pharmacies, virtual pharmacies and individually owned ones. Still all these forms of ownerships are to have the same number of pharmacists licenses. By law, the pharmacist is to dispense the ethical medicines in accordance to a prescription . OTC products are sold without the prescription.



Medicines are exclusively sold in pharmacies. Doctors are not allowed to sell medicines except with a special permission from the Health minister if his clinic is in a remote area.

GOOD PHARMACY PRACTICE (GPP): In 2008, the concept of GPP was officially launched under the patronage of the Health minister during the convening of JPA annual conference. The GPP Board is working on achieving its mission by activating the role of the pharmacist as a health care provider focusing on the patient and developing the pharmaceutical services rendered by the pharmacist for the benefit and safety of the patient.

Some of these services focused on :

1. Setting the standards of Good Pharmacy Practice representing the basic guidelines and SOPs that will guide the community pharmacist with respect to pharmacy premises, management of staff, supply and purchases of medicines, good storage practice. These standards were set to achieve an ethical and professional practice that would positively reflect the professional image of the role of the pharmacist to patient and the society at large,
2. Held several professional conferences promoting the concept of quality system, total quality management,
3. Held several training focusing on patient counseling
4. The GPP board launched three publications namely "Fact Card Booklet" an easy – use – guide for the OTC products, a guide about Pregnancy and the Child while the third booklet details all pharmaceutical forms available helping the pharmacist to counsel patient about the proper use.
5. Created a web page specially designed for pharmacists to communicate and interact on JPA website.

JPA is in the process of adopting the project for immunization in community pharmacy as well as introducing different cognitive services.

Community Pharmacy Practice in Lebanon



The main objective of the 'Lebanese Order of Pharmacists', headed by President Rabih Hassouneh, is to create and reinforce the sense of belonging to the Order and to introduce new projects to better serve and support students as well as all Pharmacists among which Community Pharmacists ending up in optimizing the quality of the service rendered to the patient.

The Order, within the current mandate, is aiming to establish and emphasize its role in drafting the professional vision and implementing a plan to develop the patient care at Community Pharmacy level by suggesting new laws and improving the practice.

The main concern of the Order is to correct the vision of the community towards the pharmacists from simple medicines dispensers to "an active health care provider" who is one of the pillars of the healthcare system. Thus the order is working on empowering the pharmacists to handle the chronic patients after their consultation with their physicians and encouraging them to have in each community pharmacy "a counselling point".

As such, and as of early 2014, the Order started implementing a reorganization plan on the Professional level as well as restructuring internally the Order.



Education:

In order to become a pharmacist, a minimum of five years program is applicable in five universities on the Lebanese territory: One National Public and four Private universities. A further one year study will allow the pharmacist to hold a Pharm.D degree.

For the first time, the Order has set in 2014 official criteria to define acceptable "Maître de Stage" (preceptor) to allow optimal quality of training of pharmacists-to-be.

All Lebanese students – apart from those who have completed their studies at the National University – will need to pass the colloquium before they are granted the permission to practice the profession. As of 2014, the Lebanese Order of Pharmacists along with the Ministry of Higher Education and the Lebanese University, have agreed to have the colloquium questions automated and computerized to ensure fairness and transparency in assessing graduated students.

Profession Facts:

Pharmacy profession in Lebanon is one of the fastest growing professions in the country. With a total of 4 million Lebanese citizens, total Pharmacists account for 7,394 at an average of 18.50 pharmacists per 10,000 inhabitants; one of the highest levels around the world.

The current breakdown of Pharmacists by job category is as follows:

Job Category	Owner	Employee
Community	2,802	865
Hospital Pharmacist	0	141
Medical Laboratory	38	44
Importation and Distribution	44	601
Dispensary	0	50
Manufacturing Site	1	60
Scientific Office	0	439
Various	3	359
Total	2,888	2,649

Unfortunately, due to the increase of yearly pharmacy graduates, Lebanon is facing a problem of unemployment with currently around 1,800 pharmacists with no jobs. This point is one of the major reasons behind Order's refusal of granting licenses for new schools of Pharmacy.

The female pharmacists' number overcomes the male pharmacists (60 vs. 40 per cent). The number of current retired pharmacists is 200 pharmacists with around a maximum of 10 new Pharmacists retiring a year.

The Order is undergoing an internal restructuring to improve the services rendered to the Pharmacists: Automation and creation of processes (new website, enhancing communication with Pharmacists, ISO Certification (undergoing) as well as enhancing the work of Pharmacy Research and Development Department (Drug Information Centre).

Community Pharmacy:

As per the Lebanese population, Community and Hospital Pharmacies are not evenly distributed in all regions (mouhafazats) as shown in below table:

Region	Community Pharmacy	Hospital Pharmacy
Beirut	227	20
Mount Lebanon	1,238	51
Bekaa	426	20
North	411	25
South	311	15
Nabatieh	189	10
TOTAL	2,802	141

(Source: Lebanese order of Pharmacists)

As shown in the tables, around 38% of pharmacists are community pharmacy owners but unfortunately besides the owners only 865 pharmacists work in community. Pharmacists tend to prefer to work in pharmaceutical companies for better income. The Order is establishing plans to promote work in Community and encourage pharmacists to choose this sector.

An average of 140 new pharmacies is opening per year over the last 6 years compared to 90 new pharmacies over previous years.

Chain pharmacies are prohibited by law and owner of community pharmacy cannot have a second full time job in the pharmacy sector or any other sector. The Lebanese Order of Pharmacists has struggled for years to prevent allowing Chain pharmacies to protect Community Pharmacy Practice from the intruders.

Community Pharmacists are not allowed to interfere in physicians' prescription and can only change them after consultation with and consent by the Physician.

OTC products are not well defined by law but are only sold in pharmacies and pharmacists commonly give advice on their use, dosages and indications..

Lebanese patients rely a lot on pharmacists for minor illnesses and abide to their advice and consultation.

Home delivery is prohibited by law but some Pharmacists are trying to use it as an attraction to patients. Pricing of medicines is set by the Lebanese MOH and pharmacists are not allowed to do any discounts, medicines prices are supposed to be the same in all Pharmacies

Continuing Education:

The Lebanese Order of Pharmacists started also in 2014 to implement the Continuing Education law issued in 2011. The next project is to launch the Continuing Professional Development encouraging Pharmacists to apply skills in their workplace and to develop their own learning needs to be applied in practice.

2020 Plan:

The Order established mid 2014 a 2020 plan allowing progress in the field of pharmacy in all sectors especially on Community level. Committees are being set to start follow up and suggest projects laws for each sector for the Order to adopt and submit to the parliamentary Commissions for processing. Evolution in Pharmacy Practice and specifically in Community Pharmacy is a never ending process to which both Orders and the Pharmacists – on personal level – need to participate.

Community Pharmacy Practice in Nepal

The pharmaceutical sector of Nepal is at the developmental stage. Different types of activities were initiated at different points of time in the short history of this sector. Sale-distribution of medicines and use of modern medicines in the country date back to the launch of modern hospital services somewhere around early 20th century. Other sections like academic, industrial, regulatory, hospital practice of this sector have taken several decades before their foundation formally.

Regulation of pharmacies

Community pharmacies are registered with the Dept. of Drug Administration (DDA) as per the provision of the Drug Act 1978 and the Drug Registration Regulation 1981. Regulatory provisions are similar for wholesale and retail medicine shops. Only an indication in the common certificate differentiate wholesale from retail. Every pharmacy needs to be operated either by a pharmacist or pharmacy assistant or by a vyabasayi.

Drugs categorized as abusive and toxic, and major therapeutic group require at least one of these categories of manpower to dispense the prescription issued by a doctor registered with NMC. Only medicines which are labelled as 'over the counter' can be sold and distributed in reasonable amount by people other than the above category of personnel. Medicines with abusive and toxicity potential need to be kept safely and a prescription on such items should be kept together with records in a defined format. Anything happening otherwise is defined as abuse or misuse of medicines and there is punishment and penalty for it. Every pharmacy needs to have a valid registration document at all time. Pharmacies are inspected for compliance with terms and conditions of certification as well as market authorization of products. Besides infrastructure, they are also inspected for compliance with inventory systems and standards on sale-distribution of medicines.

Community pharmacy is the platform where people attempt to visit in first attempt and seek to resolve their minor health problem and obtain health commodities on out-of-pocket (65% of total health expenses) basis.

Where public health facilities are not within communities, people tend to attend pharmacies for primary care and referral. The government operates 5000 facilities throughout the country comprising of Primary Health facilities (Health posts, Primary Health Centres and district hospitals), Zonal, Regional, and Tertiary Hospitals as part of the healthcare system. In these facilities, the government has launched several interventions like social health security, access to health commodities supported through pooled funds and other priority interventions like IMNCI, MCH, safe abortion, family planning, renal failure, rheumatic heart disease, cancer, PEN, free essential drugs, etc. to reduce the health care burden on individuals and therefore ensure people's right to health.

Community pharmacies are registered with the DDA as per the provision of Drug Act 1978 and the Drug Registration Regulation 1981. Under this legal framework, pharmacies are licensed, renewed, inspected, or prosecuted against noncompliance. In the public sector, a guideline establishing own pharmacy in hospital and other healthcare institutions (Guideline on Hospital Pharmacy 2015) has been enforced recently. Where there is lack of pharmacy care structure, government is providing seed money to establish own pharmacies inside public health care institutions. As per the Directive on Standard of Upgradation, Establishment and Operation of Health Institutions 2013, pharmacy personnel are required to operate pharmacy in the premises of health facilities.

Infrastructural requirements

A code on Sale and Distribution of Drugs 2014 has been issued under section 28 of the Act. This code prescribes infrastructural and service requirement for a community and wholesale pharmacy.

A pharmacy should have proper means of storage of health commodities in a place, not affected by adverse environmental conditions like excessive temperature, humidity and light. Pharmacy can be operated only by personnel as authorized in the certificate. Most of the time this is where the challenges lie.

The code has been issued consistent with the provision of good pharmacy practice and specifies infrastructures and operational procedures for pharmacies, special services to be rendered by retail pharmacies and wholesalers. Through this the Government of Nepal is expecting to address serious anomalies thriving in the health sector, especially in the pharmacy care sector. Value for money on health commodities bought out of consumers' pocket is a remote goal.

The code, if followed is expected to serve as a milieu for implementation of some of the pharmaceutical sector specific policies and strategies prescribed by the National Health Policy 2014 and National Drug Policy 1995. The policy theme revolves around the framework of universal health coverage. The policy strategies for pharmacy care include rational use of health commodities, delivery of pharmacy care by pharmacy personnel as member of the healthcare team, ensure people's access to medicines among other things. For establishing wholesale of health commodities and for opening pharmacy in the premises of a hospital, either pharmacy assistants &/or pharmacists are required depending on the bed number. Government protection is very much enjoyed by pharmacy personnel but it has not incentivized them for their active engagement in delivering the pharmacy care to service seeker.

Services offered

Community pharmacy, popularly known in Nepali language as *Aushadhi Pasal* (medicine shop), are rooted right from metropolitan cities up to rural communities. They dispense health commodities in return of payment of the cost of the medicines (and a hefty trade margin) known as Maximum Retail Price. Everyone wants to be in the medicine trade as the margin is quite attractive, and which is not justified when one can buy health commodities from anyone without adequate consultation. Wider trade margin and free goods in the name of deal and bonus allowed in medicine make it feasible to open a pharmacy even in small communities. Even though this practice has compromised quality and cost of medicines, it is instrumental in promoting medicines at the rural set up. This has been a reason for mushrooming of illegal pharmacies.



Educational requirements

Basically, there are three categories of workforce for community pharmacy. Pharmacists can operate wholesale in any type of health commodities or a retail pharmacy in a hospital set up. This manpower undergoes a four-year bachelor in pharmacy (recognized by Nepal Pharmacy Council (NPC) Act 2000) followed by passing pharmacy licensing examination to be a certified pharmacist.

Diploma pharmacy is a three years' course of CTEVT (Council for Technical Education and Vocational Training) after high school and the graduate of this course will be recognized by NPC following a qualifying examination. Vyabasayi human resource is a basic type of work force developed by the regulatory authority (DDA) when there was no production of pharmacy personnel in the country. It is not required for this category of personnel to be registered with the Nepal Pharmacy Council but they are recognized by Drug Advisory Committee constituted under the Drug Act.

community pharmacies

From 2007 onward, Government allowed many pharmacy institutions to open colleges under different universities or training institutions under CTEVT giving diploma qualification. This has led to mushrooming. In bigger cities and the rural set up, there may be quite a significant number of unregistered units mostly run by health workers and quacks. Regulatory authority either do not have wider coverage due to lack of infrastructure or are not stopping them considering their role in bringing medicines close to communities.

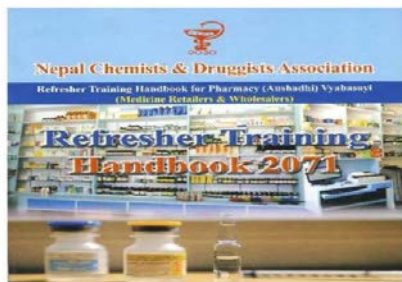


Government interventions have required engagement of pharmacy personnel in delivering pharmacy care. This protection provided to pharmacy personnel resulted in production of many diploma and graduate level pharmacy personnel but they are hardly seen in pharmacies. This manpower is enjoying protective privilege rather than instituting professionalism in pharmacy care and service provision.

Currently there are about 30 CTEVT diploma institutes and 20 bachelor level pharmacy colleges. The number of pharmacy personnel under both the categories run in thousands. There are over 3,000 wholesale firms and about 18,000 registered pharmacies selling products of different systems of medicines. An absolute majority of either categories of these firms are operated by vyabasayi.

Vyabasayi are retail and wholesale human resource oriented for a limited time ranging from 48, 72 hours and lastly 450 hours' duration on newly introduced drug regulatory framework and legally recognized to deal with medicines, mostly of the allopathic system. The idea behind providing refresher training is to upgrade their knowledge and skills and orient them towards GPP and ultimately encourage them to more towards GPP certification.

Vyabasayi were trained until 2007 when the orientation course was formally stopped. There are over 15,000 personnel trained by this system and some over 12,000 are registered with the regulatory authority, DDA (Department of Drug Administration). Currently these wholesale and retail pharmacy work force are provided with 45 hours refresher training based on a syllabus entitled 'refresher training hand book for pharmacy (Aushadhi) vyabasayi (medicine retailers and wholesalers)'. Even this category of workforce also does not attend pharmacy by themselves in a way or another. This is a huge challenge facing the regulatory authority in this front.



Special campaigns

Wholesale and retail pharmacies have a strong umbrella organization called NCDA (Nepal Chemist and Druggist Association). Many NGOs and INGOs like PSI, MSI, CRS have partnered with this organization in promoting people's access to medicine program for safe abortion, control of STD, injectable contraceptive, etc. Though not in the form of a campaign, most of the human resource (not necessarily limited to vyabasayi) perform health checkups and dispense any medicine over the counter from these retail sale pharmacies particularly based in rural communities and in urban poor communities.

Summary

Pharmacy care and service is an interim phase. Several interventions are underway like replacement of vyabasayi by pharmacy personnel. This has been a huge challenge. Regulatory compliance is a basic issue. In lack of internship and professional socialization as an academic requirement, pharmacy personnel are not equipped with required skills and attitude. This may be a reason why they remain absent from their workplace or where they have surrendered their professional certificate for opening a pharmacy. Many of them are notified by the regulatory authority not to rent their certificate. There is some amount of resistance to comply with the code on drug sale distribution 2014. Health commodities distribution network and supply chain has not been regulated properly- thus medicines are handled sub-optimally exposing them to adverse climatic conditions and ultimately rendering them unstable. Franchise in medicine promoted push sale creating health commodities related morbidity and waste of resources not only monetary but also rendering antimicrobials insensitive against pathogens. Drugs with abuse potential are dispensed illegally prompted by undue advantage. Illegal marketing strategy of pharmaceutical companies has created unholy triangular nexus of misadventure in medicine use literally in a dumping sense. Little return to pharmaceutical companies means a compromise in GMP vis-à-vis quality.

It is a pity that clients of health commodities are in trap of a vicious cycle. Although combo and combi product is not a big threat like in neighboring countries, but health commodities price hike to leverage this vicious cycle is a big public health threat facing the health policy lead universal health coverage campaign.

Pharmacy Practice in Nigeria



Pharmacists in Nigeria are found in virtually all the sectors of the economy in the country. However, the community pharmacy practice has the greatest number of pharmacists. The community pharmacy space in Nigeria consists of pharmacies manned by pharmacists which are mostly located in the urban areas and patent medicines shops mainly located in rural areas. The pharmacies are authorized to sell and dispense all medicines ranging from prescription-only medicines, over-the-counter medicines to veterinary medicines while the patent medicine shops are limited to over-the-counter medicines and some essential medicines like antimalarials.

Pharmacy Practice regulation

The practice of pharmacy in all its aspects and ramifications is regulated by Pharmacists of Nigeria. The Council sets the standards of the knowledge to be acquired for persons wishing to become pharmacists in Nigeria. It also licenses and maintains a register of licensed pharmacists. It also sets the standards for persons wishing to operate patent medicine shops, registers and licenses them for operation. The Council sets and enforces the rules and regulations that guide the operations of the various categories of pharmaceutical premises among other responsibilities.

Pharmacy Education

The minimum qualification for a pharmacist in Nigeria is Bachelor of Pharmacy (B. Pharm) or Doctor of pharmacy (Pharm. D) degree obtained from any of the eighteen accredited Faculties of Pharmacy. Currently, only one of the Faculties is accredited for the Pharm.D. training programme. These Faculties are accredited by the National Universities Commission and Pharmacists Council of Nigeria. Where this degree has been obtained from institutions outside Nigeria, the graduate will undertake the Foreign Pharmacy Graduate Orientation Programme to become eligible for registration and licensure in Nigeria. Following the successful completion of any of these programmes, the graduate is inducted by the Council and receives a provisional registration status. S/he undergoes the mandatory one year internship at any of the accredited Internship centres and then sits for the pre-registration examination. After a successful exam, the required documents are forwarded to the Council for full registration and licensure. The licence is to be renewed annually to retain a professional status for practice as a pharmacist. There are currently 23,263 fully registered pharmacists in Nigeria.

Continuing Professional Development

The Pharmacists Council of Nigeria has instituted a continuing professional programme for practicing pharmacists to update knowledge and enhance skills need for international best practices in Pharmacy. The programme commenced in 1998 making the pharmacy profession the first among the healthcare professions in the country to commence a formal professional development programme for her practitioners. The programme is made up of three modules and the pharmacist is expected to undertake these modules in five years.

Every five years, the Council updates the curriculum for the programme with current and trending issues in the healthcare system. Currently the programme is hosted online and can be undertaken by pharmacists irrespective of geographical location.

Community Pharmacy Practice

In Nigeria, the community pharmacy practice serves as the public image of the pharmacist in the society. Community Pharmacy Practice entails the setting up of pharmacy practice in retail pharmacy shops where the sale and dispensing of medicines and other patient related activities take place. These premises are under the direct supervision of a licensed pharmacist also known as the Superintendent Pharmacist. However, there may be other pharmacists who render pharmaceutical services along with the superintendent pharmacist. These outlets serve as the first port of call for the ill in the communities where they are located. There are currently 5743 registered community (retail) premises in Nigeria.

Some of the patient-centred services rendered from such outlets include monitoring of blood pressure, weight management services, medication refill, patient counselling, pregnancy testing, rapid malaria test, management of prevalent childhood diseases, that is, malaria, diarrhoea and pneumonia using the standard treatment guidelines, lifestyle medicines and counselling, family planning products refill and counselling, to mention just a few. The major issue that the profession is facing is that, it has not been given its proper place in the scheme of things in the healthcare sector of the country.

Pharmacy Practice in Norway



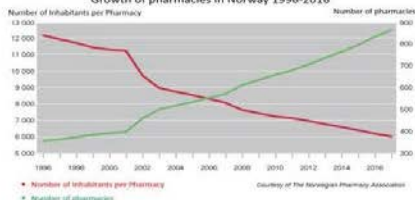
Norwegian facts

1. Kingdom with parliamentary democracy.
2. Population of 5,26 Millions (January 2017)
3. Nordic welfare model with universal health care and comprehensive social security system
4. Prescription-only-medicines to consumers only available from the pharmacies.
5. Most over-the-counter-medicines are available out of pharmacies.
6. Pharmacies' total turnover 32,9 Billions (2016)
7. 80% of the prescriptions are e-prescriptions
8. The Norwegian word for pharmacy is *apotek*
9. To work as a pharmacist in a pharmacy Norwegian authorisation or license is required

Growth of pharmacies in Norway

Since 2001 there has been a rapid growth of pharmacies in Norway. This due to a change in legislation that allowed other than trained pharmacists to own pharmacies, and the possibilities of making pharmacy chains. In November 2017 there are 895 pharmacies in Norway, but the numbers are still growing.

Growth of pharmacies in Norway 1996-2016



Community pharmacy owners

All community pharmacies are privately owned. Most of them belong to chains. The 3 largest chains are linked to their own pharmaceutical wholesaler and have international owners

Pharmacy chain	Number of pharmacies	Wholesaler	Owner
APOTEK1	360	Apotekjendistribusjon AS	Apotek1 Group that belongs to german Phoenix Group
vitusapotek*	253	NMD	NMD that belongs to american McKesson Corporation.
apotek	158	Alliance Healthcare Norge AS	Boots Norge that belongs to american Walgreens Boots Alliance
dittapotek	69	NMD	Collaboration of independent owners

In addition to the independent owners of «dittapotek» there are 23 «chain-free» independent pharmacy owners. 30 of the 32 hospital pharmacies in Norway belongs to public sector and 2 are owned by private hospital foundations.

Pharmacy staff

There are about 8600 pharmacy workers in Norway (2016) and 88 % of them are women. In general the pharmacy workers are health professionals. About 3700 of them are pharmacists (both MPharm and BPharm) and 3450 are pharmacy technicians. Only pharmacists are allowed to dispense medicine and thus a pharmacist must be present at all times in the pharmacy to keep the doors open. To run a pharmacy the manager must be Cand.pharm or Mpharm

Pharmaceutical pricing system

The Norwegian Medicines Agency (NoMA) is responsible for setting maximum prices on prescription-only-medicines. The Agency also evaluates and decides whether a medicine should be reimbursed by the National Insurance Scheme.

Because NoMA only set the maximum price prices can vary amongst the different (chain) pharmacies. The prices of veterinary and over-the-counter medicines are not regulated. There is a 25% VAT on all medicines. The National Insurance Scheme provides reimbursement for medicines, and pharmacies are, with some exceptions, obliged to dispense the cheapest product within a substitutional group.

Community pharmacy services

Most community pharmacies have relatively large self-picking areas with a wide range of over-the-counter-medicines, first aid equipment, skin and hair care products, dietary supplements, herbal products, some cosmetics and such. About 76,9 % of the turnover (2016) comes from sale of medicines.

In addition to dispensing, providing counselling and giving drug advice the pharmacies offers a wide range of services such as:

1. *Checking inhaler technique* (from 2016)
2. *Medicine start* (from 2018)
3. *Multidose packing*
4. *Stop smoking guidance*
5. *Bloodsugar, Blood pressure and Cholesterol measurements*
6. *Mole scanning*
7. *Check up for diabetes or bowel cancer*
8. *Chlamydia testing*
9. *Immunization (pilot project)*

The services may vary from (chain) pharmacy to (chain) pharmacy, but *Checking inhaler technique* and *Medicine start* are services paid for by The National Insurance Scheme and should thus be available in every pharmacy. *Checking inhaler technique* was introduced as a remunerated service in 2016, and *Medicine start* will be introduced in 2018. *Medicine start* consists of two follow-up consultations with a pharmacist. The first at 1-2 weeks and the second at 3-5 weeks after start of the new medicine. It is based on research showing that problems with newly prescribed medicines appear rapidly and that a significant portion of patients quickly becomes non-adherent.

The pharmacy margins of pharmaceuticals are relatively low and in order to make use of the pharmacy staff knowledge more pharmaceutical services are likely to be introduced in the future.

The chains are also trying out other services as skin care salons in the pharmacy and ear piercing.

Online pharmacies

From 2016 Norwegian online pharmacies are allowed to sell prescription-only-medicines. The chains Vitasapotek and Apotek1 have established their own online pharmacies to offer their customers the multichannel experience, but the largest online pharmacy, KompletApotek, is independent. The online turnover is still believed to be quite low, but increasing and no one knows how this will turn out in the future.

Independent pharmacy owner and manager of Maura Apotek, Hanne Andresen, showing her carousel of often sold prescription-only-drugs. The same type of carousel that almost all Norwegian pharmacies have



Chain pharmacy situated in a shopping mall. This is a Vitasapotek (photo taken by Stein Sjølli)



Community pharmacy practice in Portugal



Community pharmacy practice in Portugal has undergone a significant number of legislative changes in the last decade, which have had a noteworthy impact on the pharmaceutical profession. The structure of the pharmacy however has not visibly changed (figure 1).

Until 2007, Portugal had a highly regulated system, in which pharmacy ownership law established that only qualified pharmacists could own, manage and supervise a single pharmacy. Demographic and geographical criteria existed, and prevail, for the opening of new pharmacies. A new pharmacy could only be opened, by public tender, if there was a minimum of 4,000 inhabitants in that area and if there was no other pharmacy in a 500 metres radio. Pharmacies in Portugal also had the exclusive right of preparation and dispensing of all medicines for human use and medical devices.

In fact, deregulation started in 2005, when a new decree foresaw selling non-prescription medicines, other health products and some medical devices outside pharmacies, in dully registered outlets. In 2007, and following a series of media coverage, a report published by the Competition Authority and negotiations with the National Association of Pharmacies, a new legal regime for community pharmacies came into force.

The main change introduced in the regulatory framework was the end of the exclusive ownership of pharmacies by pharmacists, i.e. anyone would be entitled to own a pharmacy, except for health professionals with prescribing right (i.e. physicians), associations representing pharmacies, wholesalers and the pharmaceutical industry, as well as unions of the respective workers, wholesalers, pharmaceutical industry, private prescription centres (hospitals, clinics) and third-payers or co-payers of medicines. However, the restriction on the existence of chains was maintained, with no individual owner, company or group of companies able to own, operate or manage more than four pharmacies. The public tender of concession to open a new pharmacy was also maintained, with a change in the demographic and geographic criteria, which became 250 meters and 3 500 inhabitants, respectively.

Further changes were gradually introduced in legislation, such as the authorisation of mail order and distance selling of medicines over the Internet through pharmacies (in 2007), the establishment of minimum opening hours and the mandatory existence of a minimum of 2 pharmacists per pharmacy, with some exceptions for pharmacies located in rural areas and with minimal income as defined by law.

Simultaneously, and reflecting on the evolving role of community pharmacy as a gateway to the healthcare system, and based on the successful involvement of pharmacies in various patient-centred pharmaceutical services, new legislation came into force clarifying and expanding the types of services that may be provided in pharmacies from 2007 onwards.

These services include: homecare support, first aid assistance, administration of medicines including vaccines (not covered by the National Health Plan) and other injectables, use of diagnostic and therapeutic means, pharmaceutical care programmes, information campaigns and collaboration in health educational programmes.

A few years later, in parallel with the global economic crisis, reaching its peak in 2011, several cost-containment measures have been implemented to ensure sustainability of the healthcare system. Some of these measures comprised cuts in medicines prices, decrease of pharmacy and wholesalers margins, and decrease in medication co-payments by the Portuguese National Health Service (PNHS).

Historically, we are aware that people tend to be reluctant to change. However, threats may also be transformed into opportunities, especially when there is good organisational support for the profession. This was in fact what happened in Portugal, and although we had some situations in which pharmacies could not overcome barriers and went bankrupt, the majority was able to invest in alternative models of revenue. Pharmacists were guided to understand and be solidary with the economic constraints the country was facing (and still is, although slowly recovering) and tried to find their role within the healthcare system to be an important part of the solution. For long, pharmacists have been willing to contribute responsibly to the sustainability of the healthcare system, and have as such been implementing and disseminating a series of services that place the citizen at the centre of care. Most services developed focus on the patients' needs and additional focus is put on areas where the healthcare system cannot reach all citizens in an effective way.

Some examples include point of care testing, which initially focused on the most common biomarkers, such as blood pressure, glycaemia and cholesterol, to name a few. More recently pharmacies have expanded the range of services to include the ability to study the full lipid profile or the INR.

The latter, which is still only available in a small proportion of pharmacies, arose mostly from the fact that anticoagulated patients had no possibility to monitor themselves because the devices were too expensive to be self-purchased, and unlike diabetes there is no protocol that foresees free dispensing. Of course, the theoretical ability to monitor INR in public primary care (e.g. health care centres) existed but due to cost-containment measures, pharmacists heard frequent reports of patients complaining there were no strips available there, hence could not make the test. This is one of the services totally paid-out-of-pocket by the patient, but which has emerged to answer a specific identified need.

Point of care testing may be provided as an isolated or continuous service, as a way to monitor medication effectiveness and safety and also as a means to early detect some specific diseases, mostly when preventable, asymptomatic and with improved prognosis when detected early. In Portugal, we have shown on various areas that the community pharmacist is in an ideal position to engage in such activities and the earlier initiatives focused on people at risk for diabetes, and a few years later cardiovascular risk. More recently, some of the innovative areas where community pharmacists have been engaged and have even been recognised internationally include the detection of COPD based on spirometries, or atrial fibrillation based on portable mobile devices (figures 2a, 2b and 3).

Another example is the vaccination service, which emerged in 2007 and had a sudden boost in the offer, in parallel with the number of certified pharmacists to provide the service by the Pharmaceutical Society. However, some years later there was a clear decline when the Government started offering free vaccines at healthcare centres to high-risk patients and without the need to present a medical prescription.

In pharmacies, patients have to pay for the vaccine co-payment and for the service in full, but nonetheless still seek the service. This is mainly because they trust their pharmacist, because they do not need to wait and also because the stock does not run out in pharmacies, hence accessibility is far better in all senses in pharmacies, except for affordability. Currently, we are struggling for equality in access of high-risk patients, requesting the government to consider pharmacies as an integral part of the healthcare service. However, this will imply pharmacist access to patient health records, so that registration is possible and records fully represent vaccine coverage (figure 4).

Public health is an area where pharmacists have long contributed to. Portuguese pharmacies have been recognised for their 25 years contribution against HIV and other blood-borne diseases through their engagement in the needle exchange programme. Very recently, in 2016, the government recognised that the contribution of pharmacists resulted in a saving of 3.00€ per infection prevented, hence started reimbursing them in 2.40€ per needle exchanged.

Another service currently reimbursed, although using an incentive model, is generic substitution. Portuguese pharmacists are incentivised to select and dispense one of the lowest priced generics, contributing to savings both from the patient's perspective, who is responsible for the co-payment, but also from the NHS's perspective, who can then invest on innovation. This service is paid at 0.35€ per generic medicine dispensed since 2016. In parallel, since 2011, with more recent amendments, pharmacies are paid based on regressive margins, which have a fixed component which should compensate for the service of ensuring appropriate use of medicines through the provision of information to guide a correct utilisation.

We believe this is merely the beginning of a new era and more services are to become reimbursed once well established, provided in a standardised and sustainable manner and proven to be effective.

Currently we are focusing on three of the areas identified by the IMS Institute for Health Informatics' report "Responsible Use of Medicines" as those representing the biggest saving opportunities. These are medication adherence, polypharmacy and the correct use of antibiotics. The Portuguese Pharmaceutical Society is developing materials to guide and support practice in these areas, starting with the provision of medication reviews, an area identified as a priority by our government given our population ageing. The second area where we shall invest is the provision of the multicompartiment aids service as part of an adherence enhancement strategy and may also consider other approaches already in place, which are suitable for the specific case of new medication, aligned with the New Medicines Service already well established in the UK and in some Scandinavian countries.

Lewis Carroll stated in the epic story of Alice in wonderland: "Why, sometimes I've believed as many as six impossible things before breakfast". Portuguese pharmacists believe there are no impossible things, similar to the door in Alice's tale, so before breakfast we start working on them to make them happen.

Figure 1: Image of a typical Portuguese pharmacy in an urban location



Figure 2a: Pharmacist in a private counselling office undertaking an evaluation, including point of care for blood pressure and manual pulse check, urban community pharmacy



Figure 2b: Pharmacist using a mobile single lead ECG at a community pharmacy in a sub-urban area



Figure 3: Pharmacist leading the patient on a spirometry test

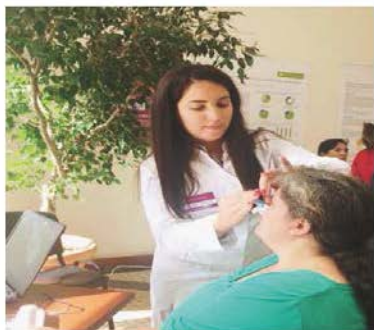


Figure 4: Pharmacist administering a flu vaccine



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Community Pharmacy Practice in South Africa



Undergraduate pharmacy education is offered in nine pharmacy schools in South Africa. BPharm graduates emerge as generalist pharmacists after four years at university. A one year internship must be served in a community, hospital or manufacturing pharmacy or the graduate may choose to spend two years as an academic intern while working towards a Masters degree in any aspect of pharmacy. Following registration as a pharmacist, a further year must be spent performing community service in a public sector facility before the new pharmacist is able to work in a pharmacy of his or her choice.

Currently, only two specialities for pharmacists may be registered with the South African Pharmacy Council. These are Radio-pharmacists and Clinical Pharmacokineticists. The Council intends to recognise more specialities in the future. These will be for specialists in Clinical Pharmacy, and Public Health and Management.



Typical Independent Pharmacy

The law that regulates pharmacy ownership changed in 2004 to allow non-pharmacists to own pharmacies provided that there is always a pharmacist on duty in the pharmacy. There are approximately 2500 independently owned pharmacies and approximately 700 corporate pharmacies that serve mainly urban patients. Mail-order pharmacy provides the bulk of chronic medicine supplied to predominantly elderly patients. There are approximately 14000 pharmacists on the register of the SA Pharmacy Council. There are 610 hospitals and 3310 clinics – mostly operated by the State – available to patients. The density of the population that a pharmacy serves can range from 5000 to 10 000 patients per pharmacy depending on the area.

Community pharmacies in South Africa supply prescribed medicine to approximately 20% of the 55 million population, while the State serves the other 80%. A large percentage of State patients also buy medicines from community pharmacies as an out-of-pocket expense.



Typical mega-chain pharmacy

Because of the shortage of medical doctors, some pharmacists who have undergone supplementary clinical training are allowed, where the need arises, to diagnose and to treat patients with medicine from the Essential Medicines List (EML), according to Standard Treatment Guidelines. Many of these medicines may usually not be dispensed by pharmacists without a valid prescription from an authorised prescriber. Many of these Primary Care Drug Therapy (PCDT) pharmacists treat patients in areas where there is either a shortage of doctors or no doctors at all.

General pharmacists are also allowed to do certain primary health services like screening tests for blood pressure, glucose, cholesterol, pregnancy and HIV, as well as immunisation. Pharmacist can refer patients to doctors for further follow up and treatment if the condition warrants it.

Medicine is sold by manufacturers at a Single Exit Price that is the same for everyone. In addition, when selling to the public pharmacists charge a dispensing fee determined by the Pricing Committee of the Department of Health. It is a maximum fee, and is often discounted, especially by the larger chain groups and corporate owned pharmacies. Medical schemes (third party insurers) generally do not pay the dispensing fee as published, and they reimburse pharmacists at a much lower rate. This places the profitability and viability of pharmacies under severe pressure.

Pharmacists are obliged by law to inform patients of the benefits of generic substitution. The patient may refuse the substitution, but generally must then pay the difference in price out of their own pockets as medical schemes may pay only for generics products and not for innovator products. Some medical schemes have formularies and pay pharmacists performance based remuneration for compliance to the formulary.

The South African government is planning to implement universal healthcare coverage for all its citizens and community pharmacy can play an important role in alleviating the pressure on public sector health facilities by serving patients not currently obtaining their medicines in the private sector. Negotiations are taking place to find a best practice model to achieve that objective.

Pharmacy in South Africa is dynamic, alive and ready for the challenges – similar to pharmacists worldwide. It will remain one of the most innovative professions that exist!

Community Pharmacy Practice in S. Korea



There are about 70,000 pharmacists in Korea and they are represented by the Korean Pharmaceutical Association (KPA). KPA was founded in 1953 when the Pharmaceutical Affairs Law was legislated, and it was authorized by the government as a non-profit organization in the following year. One of its major missions is to protect pharmacists' rights and to expand and develop the pharmacy profession.

KPA offers electronic drug information services to all the registered community pharmacies on a real time-basis at no charge. When the pharmacy profession is at stake, especially if the issue is about a community pharmacy, KPA serves as a channel towards Korean Food and Drug Administration (KFDA) and National Health Insurance Corporation (NHIC). NHIC is a single entity for health insurance in Korea and is managed by the government (Ministry of Health and Welfare). NHIC is similar to the Medicaid in the US. While Medicaid is a healthcare system for people with lower-income background in US, NHIC encompasses the entire population in Korea.

Under the umbrella of KPA, there are 16 regional divisions and 5 special overseas divisions. It is composed of 228 branch (local) pharmaceutical associations nationwide and there are about 21,000 community pharmacies as of 2015 statistics.

Pharmacist members are engaged in a wide range of professions such as working in community pharmacies, medical service areas, pharmaceutical industries, government and public sectors, academia and research institutes. Among those diverse professions, community pharmacists take up about 80% of all actively registered members, accounting for about 35,000 pharmacists.

Pharmacy education was changed from a four-year to a six-year system for a professional degree program (Doctor of Pharmacy) in 2011. Final year of the education is dedicated to an on-site experiential program at various sites such as community pharmacy, hospital pharmacy, pharmaceutical industry, research centre depending on the student's choice for his/her preferred future profession. One who wants to enter a pharmacy college needs to finish at least two years of college education (major does not matter) prior to application. Currently, there are 35 colleges of pharmacy with 1,900 students.

License examination is offered by the Korea Health Personnel Licensing Examination Institute, an affiliated organization of Ministry of Health and Welfare. It is offered only once a year in the middle of January. Subjects for the examination are now four which include life science pharmacy, industrial pharmacy, clinical pharmacy, and jurisprudence (pharmacy and other related laws). Examination format is a multiple choice question (1 point for each question) and the number of the questions in the four subjects are 100, 90, 140 and 20, respectively, totalling 350 questions. Foreign pharmacists can also apply for the examination if he/she meets the requirements. Information for the requirements can be obtained at the homepage of the institute (www.kuksiwon.or.kr).

In Korea, only pharmacists can own and run a community pharmacy business, meaning no corporate pharmacy is allowed at present. There was a constitutional petition years ago and the Supreme Court judged that the ban for corporate bodies from opening the pharmacy business was against the constitution. Nevertheless, lawmakers did not amend the related article in the Pharmaceutical Affairs Law, so corporate pharmacy such as CVS Pharmacy and Walgreen Pharmacy cannot run a community pharmacy business in Korea, which is beneficial to pharmacists.

Most community pharmacies in Korea are owned and run by two pharmacists. And one pharmacist can own only one pharmacy. Community pharmacy can be categorized depending on the size of the daily prescription filling. About two third of the pharmacy are medium sized (daily prescription filling: 30-99) and there are very small pharmacies (11.18% of all pharmacies) which fill less than 30 prescriptions a day.

During weekdays, business hours of most community pharmacies (about 90% of all pharmacies) is 10-14 hours a day. Some pharmacies run more than 14 hours a day while some pharmacies run less than 10 hours a day. During weekends, however, the business hour is very short and nine out of ten pharmacies do not even open on Sundays and holidays. Therefore, it is not easy to find a pharmacy operating on Saturday evening and the entire day of holidays. This accessibility issue has been a big complaint from customers and patient organizations in Korea.

Community pharmacists are supposed to provide counselling and drug information services to patients (many times just a customer). The contents of the counselling and information that pharmacists may offer are restricted, by the pharmacy law, to (1) drug information approved by the Korean FDA on how to use and (2) information to assist customers self-purchasing activity strictly without diagnostic discretion. Therefore, in fact, the counselling and drug information provision in the community pharmacy are just nominal and have no meaning.

Nevertheless, the service is the basis for medication dispensing fee to claim to health insurance (NHIC). The amount that NHIC pays pharmacists for that service reaches about a billion US dollars each year.

Medication cost and dispensing fee for prescription filling are processed by electronic billing claims, and they account for about one third of NHIC budget and constitute about 80% of community pharmacy revenue. The medication cost and dispensing fee are expected to reach 15 billion US dollars in 2015. The billing claim is part of the functions included in the electronic pharmacy management program software. There are several program vendors available in Korea. But, more than 80% of all community pharmacies use the software named PM 2000 offered by the Korea Pharmaceutical Information Centre (KPIC, an independent foundation of KPA) at no charge.

KPA and 21,000 community pharmacies in Korea continue to work hard to develop the pharmacy profession and the growth of the public health service system, which unites the benefits of the public and pharmacists' rights.



Type and proportion of community pharmacies in Korea

Type of pharmacy	Proportion (%)
Extra large	3.63
Large	18.13
Medium	66.47
Small	11.18
Others	0.60

(oriental medicine specialty, etc)

Extra-large, large, medium, and small pharmacy types are based on daily prescription filling ≥ 200 , 100-199, 30-99, and < 30 , respectively.

Accessibility of community pharmacies in Korea

Daily business hour (h)	Weekdays (%)	Saturday (%)	Holidays (%)
<8	0.30	33.13	36.05
8-9.9	2.72	28.27	23.13
10-11.9	43.20	13.37	19.73
12-13.9	47.73	20.67	19.05
≥ 14	6.04	4.56	2.04

Community Pharmacy Practice in Spain



- Collaboration in programmes promoted by the health administrators to guarantee the quality of pharmaceutical and healthcare in general, promotion and protection of health, disease prevention and health education.
- Collaboration with the health authorities in training and information aimed at healthcare professionals and other users on the rational use of medicines and medical devices.
- Collaboration in teaching for the preparation of a degree in Pharmacy.

In Spain, a Degree in Pharmacy opens the possibility of being incorporated in the labour market in a large number of professional pathways, although the most common is within the activities carried out in the pharmacy. Currently there are more than 45,000 pharmacists working in 21,000 or more Spanish community pharmacies as owners, co-owners, associates, supervisors and substitutes.

Community pharmacies are private health establishments, open to the public, that are subject to health planning established in the various autonomous regions and where the pharmacist owner/proprietor thereof is assisted, where appropriate, by pharmaceutical assistants or auxiliary staff and must provide the following basic services to the public:

- The acquisition, safekeeping, conservation and dispensing of medicines and health products.
- Monitoring, control and safekeeping of dispensed prescriptions.
- The compounding of medicines.
- Giving information about and monitoring pharmacological treatments to patients.
- Collaboration in the control of individualized drug use in order to detect adverse reactions that may occur and communicating those to the agencies responsible for pharmacovigilance.

The Law incorporates the concept of pharmaceutical care in its articles, thus recognizing the work of the pharmacist as a health agent.

In Spain, the owner of a pharmacy must fundamentally be a pharmacist, either as an individual owner or in partnership with other pharmacists, but each pharmacist can only own one pharmacy. It is a mechanism that guarantees independence in the activities of pharmacists, so they are not constrained by any other interests than those that are strictly in the medical and health fields. In addition, it avoids conflicts of interest with other health professionals, prescribers or pharmaceutical laboratories and also facilitates independent advice for the public.



The Spanish model of population based modules and organizing pharmacies by introducing mandatory distances between them, allows for 99% of the Spanish population to have a pharmacy within their municipality, ensuring access to the same medications and at the same prices, guaranteeing equality throughout the geographical region of Spain. In this way, a homogenous distribution of pharmacies has been achieved, with the average ratio of inhabitants per pharmacy among the lowest in Europe (2,186 inhabitants/pharmacy: December 31, 2013) which means that 99% of the population have a pharmacy at their disposal in their residential area, whether it be a rural, urban or tourist region. This circumstance means that in many populations the pharmacist is the only health care professional present.

Virtually all Spanish pharmacies participate in the System of Management and Collection of Packaging of Medicinal Products (SIGRE) with the aim of preserving the environment from unused or expired medicines.

Every day in Spain there is a sufficient number of Pharmacies on 24 hour call to meet the urgent needs of the entire Spanish population.

The Pharmacy is one of the services best valued by society. Complaints about pharmacies received by consumer organizations represent only 0,27%, while other services represent 14%.

Every year pharmacists offer health care recommendations 182 million times, as well as dispensing medicine. This means that one Spanish person in every three who enter a pharmacy, will not receive a drug, but will receive health advice instead.

The value of equivalent activities, measured by the savings produced for the healthcare system, reaches an annual level that exceeds 1,700 million Euros.

Spain, in comparison to other countries in the European Union, has the second lowest average drug prices and in the average sales figures per pharmacy, it is one of the lowest in Europe.

The price of drugs is set by a regulated pricing system that establishes a fixed price for these, to be dispensed through the national health system with a personal prescription and this regulated price includes unfunded drugs or those that do not require prescription for their distribution. (In some cases for these, a double price is established, the cheapest for when they are particularly dispensed with a prescription from the public system).

The retributive system for pharmacies is also regulated, establishing a margin for drug dispensing (27.9% gross, which after expenses and mandatory administration discounts is approximately 9% before tax).

A subsidized payment system exists for patients who are dispensed medication with a public system prescription which ranges from exemption from part payment up to 60% of the price of the medical product with a monthly limit on subsidized payments of 10% for pensioners. (Usually set at €8 per month).

The average cost for a prescription from the social system is €10.75 per medicine.

Spanish regulations mean that, in practice, all Bioequivalent or Biosimilar products (brand and generic) have the same price in Spain. At end of 2015, reference price-regulated medicines reached almost 80% of the whole prescription market, in terms of units (number of packages of drugs dispensed) and exceeded 50% of the total turnover of prescriptions in pharmacies.



Pharmaceutical activities in Spain are based on dispensing of drugs and there are very few paid pharmaceutical services performed here, even though it is common for pharmacists to also provide services related to optics, orthopaedics and dietetics.

The pharmaceutical service that is traditionally most widespread is probably the medicine compounding. Also, the dispensing of methadone and the determination of HIV (Basque country and Catalonia), screening for colon cancer (Catalonia), management of medication, attended to by social services in the different municipalities in the Basque country, development of customized dosing systems (dose dispensing) and the measurement of height and weight, blood pressure measurement and determination of certain biological parameters such as blood glucose and total cholesterol are carried out.



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Community Pharmacy Practice in Sri Lanka



Sri Lanka is a developing country with a population of 20.3 million people living in a land area of 62 710 Sq. Km. The urban sector population accounts for 18.3% while the rural sector is 77.3% and the remaining 4.4% is the estate sector predominantly the tea plantation. The health care status in Sri Lanka has been considered as one of the most cost effective health care systems when considering the health indicators such as maternal mortality rate, infant mortality rate and life expectancy at birth.

However, the present demographic and epidemiological transitions faced by Sri Lanka have led to a rapid increase in the population of elderly over the next few decades. This group is likely to have a high prevalence of age-related diseases e.g. non-communicable diseases such as diabetes, hypertension, ischemic heart disease and stroke and disabilities. With the increase of these diseases drug therapy has become the most frequently used form of medical intervention. The range of medications available to treat these conditions has also broadened. Means of assuring rational and cost-effective use of medicines are needed and pharmacists have a key role play in meeting these requirements.

The Medical Ordinance No. 26 of 1927 includes provisions for registration of pharmacists. The regulatory body of pharmacists is the Sri Lanka Medical Council (SLMC).

The SLMC recognizes the following qualifications for registration of pharmacists:

1. Certificate of Efficiency as a Pharmacist issued by the Sri Lanka Medical College Council
2. Certificate of Proficiency as a Pharmacist issued by the Sri Lanka Medical College Council followed by a Diploma granted by the Ministry of Health
3. Degree or Diploma granted by any university established under Universities Act No. 16 of 1978
4. Qualification in Pharmacy granted by an institution outside Sri Lanka recognized by the Sri Lanka Medical College Council

Community pharmacies play a major role in supplying medicines to the out-patients in the private sector. Predominantly the community pharmacies in Sri Lanka today are managed by the holders of the Certificate of Efficiency issued by the Sri Lanka Medical College Council (CMCC). In order to obtain this certificate a person should possess at least 3 passes in GCE (Advanced Level) including chemistry as one of the subjects as the basic educational qualification. He or she should serve an apprenticeship under a “Master Pharmacist” for two years while working in a community pharmacy. Thereafter, the apprentice pharmacist should get through the examination conducted by the CMCC and after the successful completion of all the requirements he is eligible for the Certificate of Efficiency as a Pharmacist.



In Sri Lanka, all pharmacies need to be registered with the Cosmetics, Devices and Drugs Authority (CDDA) of the Ministry of Health. There are four types of pharmacies based on their business models. They are:

1. Pharmacies owned by a registered pharmacist
2. Pharmacies owned by a business person who employs registered pharmacist(s)
3. Chain Pharmacies – multiple pharmacies owned by a person who employs registered pharmacist(s) for each outlet
4. “Raajya Osusalas” - multiple pharmacies owned by the State Pharmaceuticals Corporation that employ registered pharmacist(s) for each outlet.

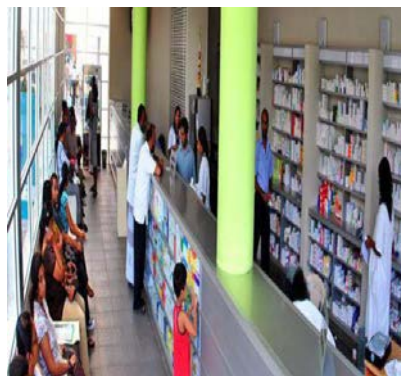
Ownership of pharmacies by pharmacists is very minimal. Most of the pharmacists in the community sector are working as employees of enterprises owned by the business community. Some of the chain pharmacies are owned by companies that are engaged in importing of pharmaceutical products.

Community pharmacies in Sri Lanka are regulated by the Cosmetics Devices and Drugs Regulatory Authority (CDDRA). As per the legislation of the Cosmetics Devices and Drugs Act every community pharmacy should be under the control of a registered pharmacist. The licence of the pharmacy should be renewed yearly.

Both public and private sectors are involved in the provision of medicines to people in Sri Lanka. In the public sector medicines are supplied free to both inpatients and outpatients. Majority of the out patients obtain their medicines from community pharmacies. Others receive their medicines from dispensing doctors and there is an increasing trend of provision of medicines by these doctors. In both these cases patients have to pay for their medicines. In the case of dispensing doctors the cost of medicines is included in the doctor’s consulting fee. There is no organized insurance scheme to cover cost of medicines for a major portion of the general public. Majority of the employers of the private sector establishments as well as government corporations and statutory bodies offer a medical insurance scheme for their employees.

This generally has an upper limit for out-patient care and a higher upper limit for in-patient care. These organizations include banks, private companies, and government corporations. A scheme known as “Agrahara Medical Insurance Scheme” was set up to cover medical insurance for permanent and pensionable officers of the public sector. There is a monthly contribution from the employee for this compulsory scheme but does not cover out-patient care. Some community pharmacies including the government owned “Raajya Osusalas” offer a 5% discount for senior citizens for their medicine.

According to the CDDRA data the total number of community pharmacies available in Sri Lanka as of 1st December 2013 is 2083. The highest number of pharmacies is concentrated in the region of the capital city, Colombo. Rest of the pharmacies are mostly concentrated in urban areas creating an uneven distribution throughout the country due to the absence of a policy for limiting the number of pharmacies based on some accepted criteria. Although the laws require the presence of a pharmacist to supervise the activities related to sale of medicines many community pharmacies are in operation without a pharmacist. Displaying the licence of the pharmacist as well as the licence of the pharmacy with the photograph of the responsible pharmacist in a conspicuous place is required by the CDDRA.



In the absence of a pharmacist the services provided by ordinary sales persons are mainly confined to issuing medicines on prescriptions or sometimes even without prescriptions. The labelling requirements are complied with to a satisfactory level in the community pharmacy sector but there is an urgent need to address the gaps in relation to “pharmaceutical care”. Due to these reasons the community pharmacist today is seen merely as a business person rather than a health professional.

Pharmaceutical Society of Sri Lanka (PSSL) has initiated several steps to improve the community pharmacy services. In 2007 as a member organization of the FIP-SEARPharm Forum PSSL became a signatory to the “Bangkok declaration of good pharmacy practice in the community pharmacy settings” and initiated many activities towards raising the standards of pharmacy services and professional practice. Good Pharmacy Practice (GPP) guidelines were prepared and introduced to the practicing pharmacists. Several training programmes were conducted on GPP including collaborative programmes with the Community Pharmacy Division of the Indian Pharmaceutical Association. A committee was formed in collaboration with the Ministry of Health to improve the community pharmacy setup through the implementation of GPP requirements. A new bill has been drafted to establish a National Medicinal Drug Regulatory Authority in Sri Lanka. As Sri Lankan pharmacists we have much hope that this legislation will provide some strong provisions to improve the community pharmacy services in the country.

Health Care and Community pharmacy in Sweden



Equal access – the key to keeping Sweden healthy

People in Sweden are living increasingly longer. The average life span is now 83.7 years for women and 80.1 years for men. This can be attributed in part to falling mortality rates from heart attacks and strokes. In 2016, 20 percent of the country's population was 65 or older. That means Sweden proportionally has one of Europe's largest elderly populations. On the other hand, the number of children born in Sweden has been increasing each year since the late 1990s.

Shared responsibility

The responsibility for health and medical care in Sweden is shared by the central Government, county councils and municipalities. The Health and Medical Service Act regulates the responsibilities of county councils and municipalities, and gives local Governments more freedom in this area. The role of the central Government is to establish principles and guidelines, and to set the political agenda for health and medical care. It does this through laws and ordinances or by reaching agreements with the Swedish Association of Local Authorities and Regions (SALAR), which represents the county councils and municipalities.

Decentralized health care

Responsibility for providing health care is devolved to the county councils and, in some cases, municipal Governments.

County councils are political bodies whose representatives are elected by county residents every four years on the same day as national general elections. Swedish policy states that every county council must provide residents with good-quality health and medical care, and work to promote good health for the entire population. County councils are also responsible for dental care for local residents up to the age of 20.

Patient fees

The fee for a hospital stay is maximum SEK 100 per day. Patient fees for primary care vary between SEK 100 and 250 depending on the county council. For specialist visits, there is a maximum fee of SEK 350. 10 SEK is approximately 1 Euro or Rs. 80.

High-cost ceiling

After a patient has paid a total of between SEK 900 and 1,100 (depending on the county council) in the course of a year, medical consultations within 12 months of the first consultation are free of charge. There is a similar ceiling for prescription medication, so nobody pays more than SEK 2,200 in a given 12-month period.

Shared medical care

Sweden is divided into 290 municipalities and 20 county councils. Three of the county councils: Halland, Skåne and Västra Götaland – as well as Gotland municipality – are called regional councils and have assumed responsibility for regional development from the state. There is no hierarchical relation between municipalities, county councils and regions. Around 90 per cent of the work of Swedish county councils concerns health care, but they also deal with other areas such as culture and infrastructure.

Sweden's municipalities are responsible for care for the elderly in the home or in special accommodation. Their duties also include care for people with physical disabilities or psychological disorders and providing support and services for people released from hospital care as well as for school health care. Chronic diseases that require monitoring and treatment, and often life-long medication, place significant demands on the system.

Many of the challenges confronting Swedish health care can also be seen in other countries, and include issues of access, quality, efficiency and funding. One priority area is patient safety. In early 2011, Sweden enacted a new patient safety law which provides everyone affected by health care – patients, consumers and family members – new opportunities to influence health care content. The aim is to make it easier to report cases of wrong treatment.

Basic facts about community pharmacies;

1. Pharmacies in Sweden have yearly around 110 million customer visits (approximately 300 000 visits/day)
2. Sweden has around 1400 pharmacies, an increase with approx. 40% after the re-regulation of the pharmacy market, and where new pharmacies have opened in new areas of the country.
3. Today there are approximately 25 different players in the market – bigger and smaller pharmacy chains, entrepreneurs, small groups of pharmacies, private owners as well as Government owned.
4. More than 10 000 people are employed at Swedish pharmacies, where the majority are pharmacists and pharmacy technicians.
5. The standard Good Pharmacy Practice (GPP), developed by FIP and WHO, is applied at all pharmacies. The focus of GPP in Sweden is to highlight pharmacy as an integrated actor of the healthcare system, and where counselling has to have a high quality, and needs to be based upon the needs from the individual customer. The advice from the pharmacist plays a very important role in optimizing the value of the medicines.

The pharmacy market in Sweden has a number of different players, and clinical pharmacy is to be found both at community- and hospital pharmacy. As such, community pharmacy in Sweden is an integral part of the comprehensive Swedish welfare state and its high quality health care system. Hospital pharmacy is integrated into clinics and wards.

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The re-regulation of the pharmacy market

After 40 years of state monopoly of medication distribution, the Swedish pharmacy system has undergone a radical change. After 40 years of monopoly the pharmacy system was re-regulated in 2010, and the number of pharmacies has increased approximately by 46% or around 460 pharmacies. Expectations of higher efficiency, increased diversity, lower prices and higher availability for pharmacy services were some of the objectives with the re-regulation of the market.

Sweden now has 13.8 pharmacies/100 000 inhabitants. In 2016, four pharmacy chains and approximately 210 independent pharmacies operated the Swedish pharmacy market, with 10 million inhabitants. The four chain pharmacies have a market share around 91%. Apoteket (the Government owned pharmacy chain) is still the market leader and seen as a 'Lovemark' by the customers.

Opening hours have increased since the re-regulation and is today 55 hours/week, and 36% of the pharmacies are open on Sundays.

96% of all customers get all their prescriptions directly from the pharmacy at the first visit, signifying a high service degree. In 2016, the proportion of customers who were satisfied with their most recent pharmacy visit was more than 97 percent.

The most obvious benefits of the re-regulation of the pharmacy market is a greater focus on the customer, more choice of pharmacy models, development of pharmacy services and a greater access to pharmacies – simply because there are more of them and the ratio of inhabitants/pharmacy has decreased. The majority of pharmacies inherited from Apoteket, as well as all new pharmacies, have also extended their opening hours since the re-regulation of the market. In addition new jobs have been created due to the increase in pharmacy outlets, while liberalisation has created downward pressure on prices as more providers enter the market. Since November 2009, some OTC products have been available from 7000 retail outlets like grocery stores and gasoline stations in addition to pharmacies, thus opening doors to reach a wider market.

"There is a strong focus on how we can assist patients to help drive adherence and improve outcomes"
Lars-Åke Söderlund, Apoteket AB



The competition on the market is very high, demanding actors to be innovative for new services and concepts, as well as differentiating them on the market. Health and wellness are central objectives for all actors, including medicines optimization.

The Swedish Hospital pharmacy market was also re-regulated in 2008, leading to free competition among different players to provide hospital pharmacy services to hospitals. Players were chosen according to a bid management process in open tenders. Today there are three main players in the market. Clinical pharmacy services are mostly provided by in-house pharmacists at hospitals.

The high-cost threshold system for patient fees and medicines

The high-cost threshold for pharmaceutical products includes numerous types of medicines as well as medical devices, contraceptives, and other products. Certain over-the-counter medicinal products are also included. The high-cost threshold refers to the system where a medicine is tax-subsidized, and the State pays a portion of the costs. The Dental and Pharmaceutical Benefits Agency, TLV, is the Government body which determines which medicines are eligible for reimbursement status and included in the high-cost threshold. The high-cost threshold incrementally reduces patient costs for prescription medicines. The maximum cost for a patient for prescription medicines in the high cost threshold system is SEK 2,200 during a 12-month period (approximately 200 Euros or 220 USD).

TLV also determines retail margins for all pharmacies in Sweden and publishes the lists of substitutable medicines where pharmacies must choose the **cheapest** available one when appropriate. Pharmacies are responsible for offering customers the most **inexpensive** medicinal product when different versions of equal effect exist.



Sweden applies generic substitution at pharmacies which substitute prescription medicines included in the high-cost threshold whenever lower-cost medicines with the same formula exist. The prices are valid for one month at a time, so patients may be offered different medicines each time they refill a prescription. The Swedish Medical Products Agency reviews all substitutable medicines. Substitution of medicines at the pharmacy is part of the high-cost threshold system and the goal is to keep medicine costs down.

100% of prescriptions are electronically transmitted to the pharmacies, and all pharmacies can get access to the prescriptions from the E-health Agency.

E-services

During 2015, e-trade within the pharmacy market was established by all the players in the market. E-trade increases the availability and accessibility to products and services provided by the pharmacy. Even if the majority of customers visit the pharmacy in their neighbourhood, the services on the internet create both convenience and new possibilities for customers, for example in the rural areas of the country.

Much has happened in the care sector within a short space of time. We have gone from paper prescriptions to e-prescriptions, medical record systems are now electronic, and appointments are booked online. These are all examples of e-health.

Much has happened in the care sector within a short space of time. We have gone from paper prescriptions to e-prescriptions, medical record systems are now electronic, and appointments are booked online. These are all examples of e-health.

Opportunities for community pharmacy in Sweden

As we all know, the nature of healthcare is rapidly changing and community pharmacy is facing accelerated change and development. Sweden, like all EU countries faces similar challenges when it comes to future healthcare:

1. Populations are ageing
2. The burden of chronic diseases is rising
3. Public healthcare expenditure growth is unsustainable
4. In many countries the number of healthcare professionals is not sufficient
5. Digital technologies are changing patient behaviour
6. Patients' needs are changing, with many requiring more support in their homes.
7. Poor adherence to medicines contributes to further healthcare demands.

A Governmental inquiry is now developing the future role of pharmacy in Sweden, with the aim to support an expanded role for community pharmacies beyond their current core role of dispensing medicines, which the overall goal to create an even more sustainable healthcare system.





With an average of five years of professional training, a qualified pharmacist is an ideal first point of contact for any patient seeking primary care, triage or minor ailment support. They are an expert in self-care and medicines (e.g. compliance, storage, multi-pharma). A pharmacist advises customers how to use medicines correctly and prevent diseases and may organise dedicated days for certain themes such as pain, diet or skin care. Community pharmacies are highly affordable and accessible healthcare hubs, offering their medical expertise at a relatively low cost and without an appointment. This can reduce pressure on doctors and Accident and Emergency hospital units, allowing those professionals to focus on patients in the most need, thereby saving public money.

Pharmacies in Sweden already today play an expanded role by:

1. Supervising and managing patient adherence to medication regimes, e.g. Medicines Use Reviews, inhalation, diabetes equipment etc.
2. Supporting independent living and self-care
3. Playing an active role in disease prevention, e.g. epidemiological screening
4. Supporting long-term condition management through the delivery of medicines optimization
5. Participating in public health awareness campaigns and medication programmes, e.g. flu vaccinations or immunization programs.
6. Contributing to a digital ecosystem that interconnects the digital and physical worlds and enables the development of national eHealth systems
7. Supporting and collaborating with other primary healthcare professionals for better outcomes for patients



Despite the ever-increasing importance of technology and digital health, I believe the role that our pharmacists and pharmacies play, and the services they provide are critical to the future of healthcare. Pharmacists will be even more central to preserving the much needed “human factor” in the future as they will always be needed to explain the things that technology can't.

As such, I have an unwavering belief that community pharmacy has an important and growing role in delivering good quality healthcare in the heart of communities; and which goes beyond its well-established and trusted responsibility for dispensing medicines. Pharmacy and its enhanced services is a vital component in a sustainable health care system.

Let's continue to do what we do best: improve accessibility for pharmacy services and health outcomes for all patients!



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Community Pharmacy Practice in Switzerland



There are certain legal basics that make community pharmacy practice in Switzerland different. While many of them are a hindrance to pharmaceutical care for the broad population, there are also opportunities that can make pharmacy indispensable part of health care.

The Swiss health system is on the second rank among the most expensive health systems of the world. While the availability of medical care is excellent and quality is fairly good, the system in total is inefficient since some regions are highly over-covered with medical services.

The most important points of legislation for pharmacies:

1. Doctors are allowed to dispense medicines in most areas.
2. Pharmacists are allowed to dispense prescribable medicines in cases of emergency.
3. Chains and internet sale of Rx-Meds is allowed.
4. Health insurance is mandatory for every citizen, insurance companies are private, and reimbursement of services and medicines is regulated by the government.

Due to the tradition of pharmacy in Europe, the business of a pharmacy can be divided into three units: Rx-medication with related counselling, Over The Counter (OTC)-medication with related counselling and health products like cosmetics, bandages, etc. The economic importance of these sectors can vary for every pharmacy. Pharmaceutical Technicians, who take a three years education consisting of a mix of work in the pharmacy and professional school (2-3 days a week), cover the cosmetics and OTC sectors as well as a supportive role for the pharmacist in the dispensation of Rx medication. Pharmacists predominantly work with the patients in Rx and OTC dispensation and counselling.

The fact that doctors can dispense medicine and consider this as the better system requires the pharmacists to be highly competitive. Thus, pharmacists have to prove their significance in terms of knowledge, cost efficiency, accessibility and value for the patient.

This means that it's rather embarrassing for a pharmacist to dispense a drug without saying a word about dosing and side effects or asking about the patient's general conditions. Pharmacists do have the lead in patient safety by proofreading prescriptions and explaining everything necessary to the patient in order to make a therapy effective.



A fair base of knowledge in pharmacology, clinical pharmacy and pharmaceutical care is included in the five years pharmacy curriculum since about 15 years. Additionally, the Swiss Pharmacists Association (pharmaSuisse) has evolved several education programs that allow pharmacists to extend their knowledge in specific areas like community pharmacy, clinical pharmacy, counselling doctor's prescribing or, since 2012, vaccination.



Nowadays a lot of family doctors in rural areas retire without finding a successor. This gives community pharmacy a chance to show its importance in primary care. A newly up come project allows pharmacists to analyse a patient's disease by using algorithms approved by doctors to find appropriate therapy for acute health problems. Furthermore, a doctor can be contacted in uncertain situations through a video terminal. In this way, a patient can receive the complete care for acute complaints in a pharmacy!

The quality and importance of community pharmacy practice in Switzerland is steadily growing. On the other hand, pharmacists face a low appreciation in political terms and are often overpowered by physicians in legal matters. It's a long way to overcome these points. The most important means are: Effort in the daily work with patients, never ending education, providing more information to the community what pharmacists are actually doing and to take responsibility in order to make decisions on the clinical care level.

Pharmacy Practice in Taiwan



With a population of 23 million living in 36,190 km² land size, Taiwan has eight Schools of Pharmacy, graduate around 1,000 pharmacy students a year. After four years of education (four Schools started 6 year Pharm.D. program), graduates with a bachelor degree need to take and pass the national board examination to become a pharmacist. She/he then need to join the city or county Pharmacist Association and then register in that city or county Department of Health to get his/her pharmacist practice license to be able to practice. All city and county Pharmacist Associations joined together to become the Taiwan Pharmacist Association and represent one of the largest pharmacy professional organizations to communicate and negotiate pharmacists' responsibility and welfare with the government and all other professional associations in Taiwan.

After receiving the practice license, pharmacists need to renew the license every 6 years, with a total of 150 credit hours of continuing education. Currently, Taiwan has 29,133 active registered pharmacists who practice in a variety of settings. According to recent statistics, 28% of pharmacists practice in the hospital pharmacy, 30% in community pharmacy, 21% in pharmacy inside the primary care clinics, 15% in pharmaceutical industry, and others include the government services.¹ Taiwan does not have a pharmacist technician education or training program exist.

Most of the pharmacist practices in the health care sector are conducting dispensing and managerial functions in the pharmacy. However, in different levels of hospital (medical centre, regional, community hospital), different clinical pharmacy activities were required by the Hospital Accreditation body. Pharmacists may practice in the ICU wards or specialty wards, conducting therapeutic drug monitoring, ADR reporting, medication errors reporting, total nutritional support and chemotherapy compounding, some may have warfarin clinics. Good Dispensing Practice guidelines were published by the government in 1995 and revised three times to become mandatory in 2004.² Community-based Good Pharmacy Practice³ was published in 2014 to encourage more patient counselling and patient care activities can be conducted in the community pharmacy or outside to provide home care or in the long-term care facilities.

In 2007, a pharmacy law amendment was passed to add a new responsibility on pharmacist role to conduct pharmaceutical care related services. In 2009, the Taiwan Pharmacist Association successfully convinced the National Health Insurance Administration to set up a project to reimburse qualified community pharmacists to conduct home pharmaceutical care on high users of medical resources. (People who used more than 200 clinic service in the previous year or 100 physician visits after the year 2011). This movement initiated the direct patient care service provided by pharmacist in Taiwan and can be reimbursed by the health insurance program.⁴





Due to the superior performance on economic outcomes of the home care service, as shown in Table 1,⁵ the home care program still continued and now has entered into the 6th year. Each year it is challenged by the insurance administration and all other reviewers of the program. The cost-benefit ratio is around 1:1.4, meaning reimburse one dollar to the pharmacist, who can help to save 1.4 dollars outpatient health care expenditure.

Now, not only the insurance program, the Taiwan Food and Drug Administration provided a three consecutive year project to encourage community pharmacists to provide professional services inside the pharmacy (medication review and patient adherence counselling), home care on high risk patients who are using a lot of medications, and drug regimen review in the long-term care facilities. The Bureau of Health Promotion also provides funding for pharmacists to provide smoking cessation program since 2011, and diabetic management pilot program in collaboration with physicians in 2015.

Table 1. Economic Outcomes of Home Care provided by Community Pharmacists in Taiwan for the past five years. (claimed-database analysis)

Year	2010 (N=808, 42 RPh)	2011 (N=4032, 101 RPh)	2012 (N=4966, 135 RPh)	2013 (N=8038, 174 RPh)	2014 (N=8098, 170RPh)	2015 (N=7846, 162RPh)
Total # of outpt visits	B: 93.2±1.3 A: 66.2±1.3 change: ↓29%	B: 80.90±0.41 A: 66.93±0.46 change: ↓17%	B: 63.56±0.33 A: 52.99±0.34 Change: ↓17%	B: 52.69±0.25 A: 42.54±0.23 Change: ↓19%	B: 53.9±16.2 次 A: 44.8±18.2 次 Change: ↓17%	B: 60.97±28.72 次 A: 48.54±27.01 次 Change: ↓20.4%
Total outpt HC expenditure	B: 77,256±5759 A: 61,587±3221 change: ↓20% ↓\$12,660,552	B: 60,395±552 A: 54,333±627 change: ↓10% ↓\$24,441,274	B: 61,512±463 A: 52,948±508 Change: ↓14% ↓\$42,828,824	B: 56,896±489 A: 47,948±447 Change: ↓15.7% ↓\$71,924,024	B: 56,034±33,051 A: 48,288±75,386 Change: ↓14% ↓\$63,255,767	B: 50,897±36,190 A: 42,439±33,105 Change: ↓16.6% ↓\$66,366,180
Total outpt drug expenditure	B: 30,847±5498 A: 25,069±2749 change: ↓19%	B: 20,723±306 A: 18,614±298 change: ↓10%	B: 16,198±244 A: 14,435±251 Change: ↓11%	B: 14,823±237 A: 14,209±265 Change: ↓4%	B: 14,377±16,961 A: 14,024±69,969 Change: ↓3%	B: 13,993±21,136 A: 12,483±19,147 Change: ↓10.8%
Cost/Benefit ratio (remuneration: total outpt HC exp. saved)	NT\$ 5,098,000 : NT\$12,660,552 = 1 : 2.5	NT\$ 32,255,000 : NT\$ 24,441,274 = 1 : 0.8	NT\$ 34,012,000 : NT\$ 42,528,824 = 1 : 1.3	NT\$ 49,302,000 : NT\$ 71,924,024 = 1 : 1.5	NT\$ 51,362,000 NT\$ 63,255,767 = 1 : 1.2	NT\$ 41,273,340 NT\$ 66,366,180 = 1 : 1.6

N=number of patient cared; RPh=number of qualified pharmacists provided home care;
Outpt= outpatient; HC= health care; NTS= New Taiwan Dollars;

NT\$: US\$ = 30: 1.

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Community Pharmacy Practice in the United States of America



“When Pharmacists get involved in, Collaborative, Team Based Patient Care, **QUALITY** goes up and **Costs** go down”

Pharmacists in the United States are being trained as medication experts who use their detailed knowledge of medicines to help patients improve their health. Duties include dispensing medications, assuring the safety and appropriateness of the prescribed therapy, monitoring patient health and progress. Also, partnering with consumers and patients to provide education and advice on the use of medications. Pharmacists also collaborate with physicians, nurses, and other health care team members to provide expertise on drug decisions and improve patient outcomes. We provide knowledge about the composition of drugs and safeguard drug purity and potency.

Education

Licensed pharmacists in the United States (US) graduate with a Doctor of Pharmacy (Pharm.D.) degree from an accredited pharmacy school. The majority of programs require four years of undergraduate course work, but some accept students after two. Currently the 132 pharmacy schools in the US use a curriculum approved by the Accreditation Council for Pharmacy Education (ACPE) and take 4 years to complete.

The 14,000 graduates must pass the North American Pharmacist Licensure Exam (NAPLEX) and a state pharmacy law exam, which is a state-specific exam. A large number of graduates will complete a 1 to 2 year post-graduate residency following completion of their Pharm.D. program.

US Pharmacy Statistics/Trends

In 2014 pharmacists held 297,100 jobs in the US. There are 67,000 pharmacies in the United States. Almost half (33,000) are located within drug stores, grocery stores, hospitals, department stores, medical clinics, surgery clinics, universities, nursing homes, prisons, and other facilities. About 62% of pharmacists are employed by retail pharmacies (chain 28,000 pharmacies), independent (22,500 pharmacies), 22% by hospitals and the remaining 16% are working in other pharmacy sectors, such as managed care. Some states have been more proactive than others resulting in more inter-professional practice in various settings.



Collaborative Practice

Medication therapy management (MTM) is a term used to describe patient care services provided by pharmacists. The services are aimed at optimizing the patient's drug therapy and improving therapeutic outcomes. Collaborative practice agreements between pharmacists and providers enable pharmacists to perform patient assessments, order laboratory tests, and select, initiate, monitor, continue and adjust drug regimens. MTM promotes a team-based approach to patient care by building relationships with other health care providers. This translates into better patient-focused collaborative care. When our Pharmacists are members of a patient's' healthcare team, we see improved quality of care and reduced costs of care.



Steven Simenson, BPharm, FAPhA, FACA, DPNAP, serves as President and Managing Partner of Goodrich Pharmacy, Inc., 7 Community Pharmacies in Minnesota. Located in Primary Care clinics, a grocery store and a traditional stand alone Community Pharmacy. He has cared for patients since graduating from the University of Minnesota in 1977. He participates daily, and serves as an example of, innovative practice initiatives. He is involved in project IMPACT, practice based research, medication therapy management, collaborative practice, employer health and wellness services, and compounding.



We are expecting the U.S. Congress to pass legislation in 2016 to further pharmacist's role in Patient Care. This "Provider Status" legislation will improve access to, and coverage for, Pharmacists Quality patient care services. National pharmacy organizations are currently working together to encourage Congress to pass this legislation. Pharmacists in most states are working hard to update their State Scope of Practice legislation - to catch up to the realities of current practice and be able to practice in the roles that will be encouraged in the new federal legislation.



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Community Pharmacy Practice in Uruguay



General Information of the Country

Uruguay is located in South America, between Brazil and Argentina. By the South and East is bounded by the Río de la Plata and the Atlantic Ocean. Its territory covers 176.215 km² and its population is about 3,2 millions inhabitants. Uruguayan population is quite old, with 18.7% inhabitants over 60 years. The land is slightly undulated, a dense and rich fluvial network travels through the whole territory. The weather is mild, with four clearly defined seasons. The most important industries are agriculture, livestock, food processing, leather and textiles. Gross Domestic Product in 2012 was US\$ 49.920 millions. Uruguay is a representative democratic republic with a presidential system and three independent powers: executive, legislative and judicial.

Montevideo, the capital of Uruguay, is the largest city and the most important harbour of the country. It is located in the south, over the Río de la Plata. Even though Uruguay has a low population density, the situation is different in Montevideo and its Metropolitan Area. In fact, this area has about 2,0 millions inhabitants.

Uruguayan Pharmacists

There are about 1600 Pharmaceutical Chemists in Uruguay. Pharmaceutical Chemist is the official degree for those professionals who work in Pharmacy. All of them are educated in the Faculty of Chemistry of the University of the Republic, the only one that offers this career. They are distributed in all the sectors of pharmacy practice, namely hospital pharmacy, community pharmacy, pharmaceutical industry, legal authorities and education.

The practice of Pharmaceutical Chemists is regulated by the Ministry of Public Health. In Uruguay doesn't exist professionals colleges unless for the medicine practice.

The Uruguayan Association of Chemistry and Pharmacy (Asociación de Química y Farmacia del Uruguay, AQFU) gather the Pharmaceutical Chemist, but is a voluntary association. Most of the Pharmaceutical Chemists live in Montevideo and its Metropolitan Area (81%).

Community Pharmacy

In Uruguay there are about 1100 Community Pharmacies, 40% of which are in Montevideo. The Ministry of Public Health is in charge of the control of Pharmacies. By law, every Pharmacy must have a Pharmaceutical Chemist as responsible (Technical Director) but the ownership can be of any person physical or juridica capable of being a trader. Medicine doctors, dentists and veterinarians can't be owners of a Pharmacy. The Technical Director is responsible for all the pharmaceutical acts done in the Pharmacy, but don't need to be present in the Pharmacy all the time. In fact, one Pharmaceutical Chemistry can be Technical Director up to three Pharmacies.

According to the law, all medicines must be dispensed by Pharmacies and no other commerce can trade medicines.

If you take into account the relationship between the number of Pharmacies and Pharmaceutical Chemists outside Montevideo, you can see that there aren't enough professionals. Even in Montevideo, taking into account all other sectors of practice, the number of professional is not enough. This has two principal causes: there are too many Pharmacies according to the population and there are too little Pharmaceutical Chemists.

Up to 2003 the number of Pharmacies was regulated just by the distance between them, but from this year a second way to regulate the number is the population of the city (5000 inhabitants per Pharmacy). In the last fifteen years the number of new Pharmaceutical Chemists has reduced, and that is a very worrying fact for the AQFU, the Faculty of Chemistry and the Ministry of Health.

In such a situation, it is very difficult to Uruguayan pharmacists to really offer pharmaceutical assistance in the Community Pharmacy. Nevertheless, the AQFU has been working in the implementation of Good Pharmaceutical Practices and promoting the presence of the Pharmaceutical Chemist in the Pharmacy. Additionally the AQFU has taken an active role in training pharmacy assistants for the Pharmaceutical Chemist in the Community Pharmacy work. In the last 20 years many work has been done, and there have been many changes, although there is still a lot to be done.

At the end of 2013 Uruguayan Parliament has approved a law that regulates the trade of marijuana. When this law enters into force, the trade of marijuana for recreational purpose will be legal and the distribution will be done by the Community Pharmacy. A regulation of this law has been approved this month. The pharmacist role is not clearly stated. AQFU is not in agreement with the government that a pharmacist should have to be responsible of the distribution of a recreational drug in the Pharmacy.



Headquarters of the National pharmacist organization (Asociación de Quimicay Farmacia del Uruguay)



Olivencia Pharmacy – Montevideo



Farmacia Pollini – Artigas



Lyon Pigalle Pharmacy - Montevideo



Trouville Pharmacy - Montevideo



The main pharmacy chain called "Farmashop", with almost 100 pharmacies in the whole country.

Community Pharmacy Practice in Zimbabwe



Setting the scene

Zimbabwe is in the southern part of Africa, with an estimated population of thirteen million. This population is served by about 800 pharmacists, distributed in all the sectors of pharmacy practice, namely hospital pharmacy, community pharmacy, industrial and distribution services. Approximately 70% of the pharmacists carry out their profession in the community pharmacy sector, commonly referred to as "Retail Pharmacies". Most of the pharmacies are privately owned by individuals. There are a few chains pharmacies. We have seen an increase over the past ten years in the number of pharmacies which are owned by healthcare funders. The distribution of retail pharmacies in Zimbabwe is skewed towards major cities and towns, with very few pharmacies in small towns. Pharmaceutical services in the rural areas are provided by nurses at Rural Health Centres. The economic setting does not support rural pharmacy enterprise, since patients have to pay for their medicines from their own resources. Unfortunately, the rural cannot afford subscribing to medical insurance cover and there is no national health insurance cover either.

Dispensary: Prescription medicines only

The Legal Framework: Community pharmacies in Zimbabwe are licensed by several statutory bodies, each with a specific role to play. The Health Professions Council registers all health institutions, where healthcare practitioners work, including community pharmacies. This is in addition to a trading license which is issued by local authorities or municipal government.

Then, there is the Pharmacists Council of Zimbabwe (PCZ), which registers the pharmacist. The pharmacist must renew his/her practicing certificate or license annually, subject to attaining a prescribed number of Continuing Education or Continuing Professional Development points. PCZ is also responsible for verification of shareholding in the ownership of pharmacies. In terms of the law, Pharmacists must own at least 51% shares in a community pharmacy, so as to give the professional a controlling stake in the pharmacy business.

Finally, the Medicine Control Authority of Zimbabwe is concerned with minimum standards for premises where medicines are stored or distributed from. The community pharmacy should also have a private room where patients can receive counselling in privacy. The pharmacy should be under the continuous supervision of a pharmacist, otherwise the supervising pharmacist would be guilty of unprofessional conduct if he/she does not provide such supervision.

Education of Pharmacists: The minimum qualification for a pharmacist to be registered to practice in Zimbabwe is a Bachelor of Pharmacy (Hons) Degree or equivalent, plus a period of twelve months internship in registered premises. The premises and supervisor must be accredited by the Pharmacists Council of Zimbabwe. The interns would have to write a qualifying examination before they are admitted onto the register of pharmacists. There are two schools which train pharmacists, with an output of sixty pharmacists per annum from the School of Pharmacy at the University of Zimbabwe which has been in existence since 1976. The other one is newly established. Harare Institute of Technology is still to produce its first batch of students. It opened its doors for the undergraduate pharmacy training in 2012.

Practice Framework: The traditional role of pharmacists in the community pharmacy setting has been the dispensing of medicines. This role has been changing over the years, where the pharmacists are involved in pharmaceutical care and monitoring medicine use. In this regard, pharmacists have been carrying out the following services, but not limited to, blood pressure monitoring, blood glucose and cholesterol testing, screening for malaria parasite prior to initiating the recommended first-line treatment, patient education on proper use of medical devices such as inhalers. Dispensing of antibiotics is strictly on a doctor's prescription. Concern has been raised whereby antibiotics may have been dispensed without prescription for various reasons. This is in an endeavour to minimize development of antibacterial resistance, which is often associated with indiscriminate and overuse of antibiotics.



Front shop: “over-the-counter stock and cosmetics”

Some of the challenges faced by community pharmacists are medicine shortages and high prices of medicine. This reduces access to medicines for our population. The local manufacturing industry is unable to meet the local demands in terms of pharmaceutical products; hence most of the products are imported. In fact, we import a lot of medicines from India. We also have a shortage of pharmacists, such that most public institutions are supervised by non-pharmacists. Strengthening of public sector pharmacists will have a positive impact on the role of pharmacist as the ‘medicine experts’.

In terms of public health issues, pharmacists in community pharmacies are not fully integrated into the public health programs which are run under the Ministry of Health and Child Care. There is sometimes a gap in implementation of National Medicine Policies between the two sectors. The Pharmaceutical Society of Zimbabwe has been advocating for more cooperation through private-public partnerships.

Fortunately, we have a good relationship between the Retail Pharmacists Association, PSZ and the Ministry of Health and Child Care. The ministry recognizes the role played by community pharmacies in the healthcare provision.

Future of Community Pharmacy: The advent of new technologies and new medicines is a motivator for continuing professional development (CPD); hence the proof of CPD or continuing education (CE) is mandatory for annual renewal of practicing certificates for pharmacists and pharmacy technicians. Pharmacist should be adequately trained in order to provide pharmaceutical care. There is continued collaboration between practitioners, legislators and educators, in order to meet the challenge. Some of the suggested service areas are provision and administration of vaccines, HIV counselling and testing, distribution of TB Medicines (India is already doing that!) and strengthening of private-public-partnerships. Currently, community pharmacists carry out blood pressure and blood sugar monitoring, but there is no standardization of the service provided, and how the data could be effectively used in medication use monitoring. There is no accreditation of the services providers. The provision of these extended services depends on the pharmacist's initiative and intrinsic motivation. In this regards, there is no remuneration model for the service provided.

Having been said all this, the introduction of these “extended” services has sort of created some tensions between pharmacists and other healthcare professionals, such as doctors, medical laboratory scientists and technicians, and nurses to some extent. The issue here is that pharmacist are taking away their turf. The Pharmaceutical society of Zimbabwe has thus taken steps to address these concerns by holding collaborative meetings with the legislators (PCZ) and Health Professional Alliance, and with the College of Primary Care Physicians. The intention is to create trust between doctors and pharmacists. Secondly, the collaboration aims to improve the quality of service to the patients, by all concerned.



International and Regional Relations

On the international scene, Zimbabwe is a member of FIP and APF, whereby we subscribe to the statutes and recommendations of these international bodies. FIP has come up with Vision 2020 for community pharmacy, which is meant to strengthen GPP and ethics in pharmacy practice. I foresee this as a way to strengthen the role of community pharmacy practice in Zimbabwe. Zimbabwe is also a member of IPSF. The World Pharmacists day was well celebrated in Zimbabwe, followed by National Medicines week, held in the last of October. The pharmacists and undergraduate pharmacy students participated in the event, whereby they provided free blood pressure checks, blood sugar testing and BMI calculations for members of the public. The public are also given advice on adherence, proper medicine use, nutrition, Pharmacovigilance, and poison prevention. Pharmacists were also on both radio and television to promote pharmaceutical care and public awareness on the role of pharmacists as healthcare professionals.

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