

## Review Article

# The Pharmacy Profession in a Developing Country: Challenges and Suggested Governance Solutions in Lebanon

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**ABSTRACT** Throughout the years, changes occurred in pharmacists' roles on international levels. These changes are not being followed in Lebanon where community pharmacy is still practiced in a traditional way. Laws need to be updated to align with international standards to drive a change at the practice level. The Lebanese Order of Pharmacists' (OPL) mission is to raise the level of the profession. It also enforces the laws, defends the rights of pharmacists, and improves the level of practice and development of scientific competence. It is also aiming at providing the conditions for enhancing the patient's access to the appropriate medications and its safe use. Meanwhile, the OPL is facing several challenges, most importantly, the deteriorating financial situation of community pharmacists and the decrease in the retirement fund input. To find proper answers to all these issues, the OPL started working, since 2016, on solutions from a proper governance perspective, jointly with all the stakeholders such as the Ministry of Public Health, the Ministry of Education and Higher Education, the universities, and other professional associations. The suggested solutions include the application of the principles of good governance, provision of paid services, developing pharmacists' core and advanced competencies, accreditation standards generation, and new laws and decrees suggestions concerning clinical pharmacy application in hospitals and community settings, continuing education consolidation and professional development, and research- and assessment-based decisions. The suggested solutions are expected to overcome challenges and barriers while leveraging the profession and advancing it to reach international standards.

**KEYWORDS:** Lebanon, pharmacy practice, pharmacy profession

## INTRODUCTION

Modern pharmacy education was introduced in Lebanon at the end of the 19<sup>th</sup> century, after the establishment of the first two universities that taught

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pharmacy as a discipline.<sup>[1,2]</sup> With the increasing number of pharmacy graduates, it was necessary to regulate the profession, and several laws were promulgated, of which the law of 1950 on establishing the Lebanese Order of Pharmacists (OPL, the official pharmacists association in Lebanon) and the law 367/94 of 1994 governing the practice of the pharmacy profession in Lebanon.<sup>[3]</sup>

Changes that occurred in the role of pharmacists on international levels four are not following in Lebanon where pharmacy as a profession is still practiced in a traditional way, particularly in the community. Besides, laws need to be updated to align with international standards and drive a change at the practice level.<sup>[4,5]</sup> Nevertheless, community pharmacists are still considered by the Lebanese patients as the last resort and the best option among all health-care professionals, as they are available at least 12 h a day to counsel and provide services free of charge.<sup>[3]</sup>

## THE LEBANESE ORDER OF PHARMACISTS MISSION

The mission of the OPL is to protect pharmacists by enforcing laws and regulations and to raise the level of the profession by developing scientific competence. One of its goals is to facilitate to patients an appropriate access to medications and good counseling for a safe use.<sup>[6]</sup> To achieve these goals, the OPL is working through a proper governance perspective, jointly with all the stakeholders such as the Ministry of Public Health (MOPH), the Ministry of Education and Higher Education, the universities, and other professional associations. However, throughout its journey, the OPL is faced and is still facing several challenges.

## CHALLENGES FACING COMMUNITY PHARMACISTS IN LEBANON

Two decades ago, the financial situation of community pharmacists was acceptable, but it has deteriorated with the poor economic situation in Lebanon, the increasing number of community pharmacies and pharmacy graduates, and some ministerial decisions we will be developing in this article.<sup>[7]</sup> Hence, several factors can be incriminated in the worsening of the Lebanese community pharmacists' financial situation.

### Pricing methods for medications

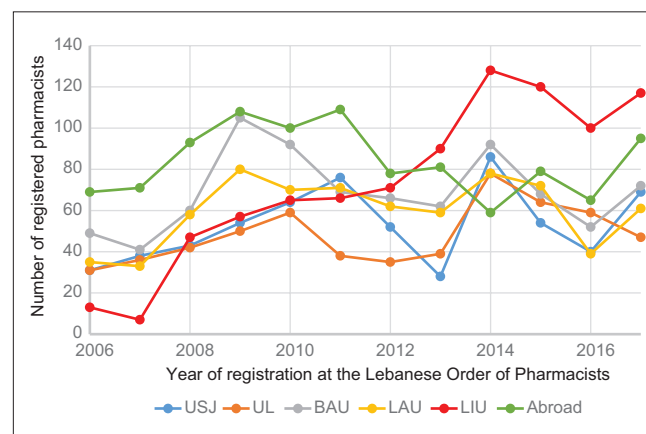
The MOPH is the legal authority in charge of setting the prices of all medications available in Lebanon. Repricing methods that were adopted by the MOPH in 2006 and amended in 2014<sup>[8]</sup> induced a dramatic drop in the public price of the majority of medications sold by community pharmacists, thus leading a lower overall

profit. In fact, the MOPH changed the fees of community pharmacists in 2006: from a fixed (23%) percentage, medications were divided into four categories of pricing (A, B, C, and D) according to the importation free on board (FOB) price or its equivalent in Cost, Insurance and Freight (CIF). The margin of profit of community pharmacists decreased from Category A to Category D, which included medications with importation FOB price above 100 USD.

In 2014, the Category D was rescheduled only to include medications which prices varied between 100 and 300 USD FOB (or its equivalent in CIF), and a new category (Category E) was introduced. It concerned medications with an importation price above 300 USD FOB or its equivalent in CIF, and the margin of profit for this category was fixed to 86 USD with no regard to the fees and taxes community pharmacists have to pay. Since these fees are insufficient to cover all expenses and taxes payable by the community pharmacists, the majority of them stopped selling these medications.<sup>[9]</sup> Consequently, pharmacists in Lebanon are losing more and more of their income. This led to lower pharmacists income (overall of 18.4% in 2017) that is expected to reach 9.9% in 2047 according to the OPL projections.

### Oversupply of pharmacy graduates

In Figure 1, graduates' numbers joining the OPL per university in the previous years are shown;<sup>[10]</sup> the mean ratio of pharmacists to population is three times higher than the global mean – 17/10,000 population globally versus 6/10,000 in Lebanon. The oversupply of graduates by universities is increasing competition between the pharmacists, decreasing the demand (and thus the salary for employed pharmacists), and consequently, the quality of services offered to patients.<sup>[11]</sup> We note



**Figure 1:** Pharmacy graduates joining the Lebanese Order of Pharmacists between 2006 and 2017 from different universities. USJ = Saint Joseph University, UL = Lebanese University, BAU = Beirut Arab University, LAU = Lebanese American University, LIU = Lebanese International University, Abroad = graduates from universities outside Lebanon

that a similar oversupply situation was found for other health-care professionals in other countries and led to similar consequences.<sup>[12,13]</sup>

### Job tenuousness among employed community pharmacists

From these conditions arises the current situation, where precarious jobs are often occupied by employed community pharmacists.<sup>[7]</sup> Community pharmacies owners cannot afford to pay decent salaries anymore nor to offer a career path. Moreover, employees are not satisfied and would leave community pharmacy when better opportunities present,<sup>[14]</sup> in particular at multinational pharmaceutical companies where better salaries and other benefits are offered.

### Effect on internal matters

The decrease in pharmacists' income (whether owners or staff) is leading to a decrease in the input of the pharmacists' retirement fund. Pharmacists who own a community pharmacy contribute a 0.5% levy from the price of each medication ordered, while employed pharmacists contribute by paying 2% of their annual gross salary. An actuarial study was conducted by a specialized firm; it showed that given all potential factors that could interfere with the fund revenues and expenses, there was a clear underfunding of the retirement system: a sharp gap will start to show in 2053, based on the current trends and different scenarios of market labor, staff salaries, medication costs, and funding input regulations. In 2065, the Lebanese pharmacists' retirement fund would bankrupt in case no drastic changes are implemented [Figure 2].

This underfunding constitutes an ethical issue because if not well fixed through just saving, it will impose an unfair burden on future generations.<sup>[15]</sup> Consequently, the funding rules have to be changed if the pharmacists want to maintain their fund on the long run; a failure to do so will jeopardize the sustainability of the fund, the structure of the OPL, and eventually, the whole profession.

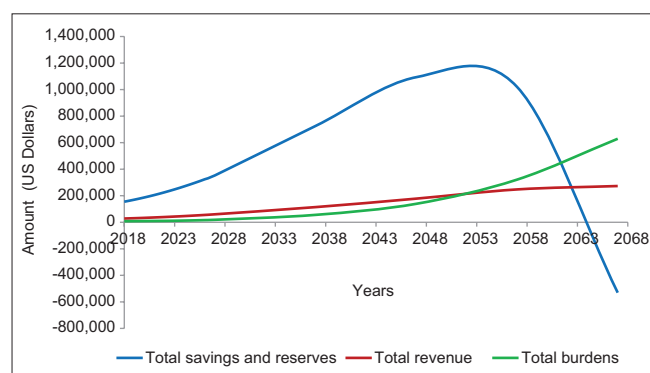


Figure 2: Input, output, and open group cash flow projections

### Burnout among community pharmacists

Furthermore, given the fierce competition between community pharmacies, the difficulty of getting assistant pharmacists (due to the deteriorated financial situation<sup>[8]</sup>) and the fact that no shift schedule is being applied, community pharmacists are working for long stressful hours, leading to an eventual burnout.<sup>[7,14]</sup>

### Effect on the professional image

The deterioration of the pharmacists' financial situation seems to be affecting the pharmacists' professional image: from a societal perspective, Lebanese patients perceive the services offered by community pharmacist as poor, which can be explained by the overload of work and the poor income.<sup>[3]</sup>

## LEBANESE ORDER OF PHARMACISTS' SUGGESTED SOLUTIONS

Projects suggested by the OPL are part of a national strategy to improve the pharmacy profession and promote patient health. It is inspired by the recommendations of the World Health Organization (WHO) and the International Pharmaceutical Federation (FIP) and is part of both educational and clinical governance concepts, pertaining to the pharmacist and the patient.

### Application of the principles of good governance

Governance is defined by "the way in which an organization is managed at the highest level and the systems for doing this."<sup>[16]</sup> Good governance is defined by Kraay *et al.*, (2004; 2007) as the "traditions and institutions by which authority in a country is exercised for the common good."<sup>[17]</sup> Its principles are described by the United Nations Development Program<sup>[18]</sup> as follows: legitimacy and voice, direction/vision, performance, accountability/transparency, and fairness/equity. Several types of governance are described: global, public, political, corporate, clinical, and educational. Pharmacists are mainly concerned by the educational (for its direct consequences on professional competencies) and clinical governance.

The National Health Service Education for Scotland defines educational governance as "the systems and standards through which organizations control their educational activities and demonstrate accountability for the continuous improvement of educational quality and performance."<sup>[19]</sup> Educational governance includes all processes and structures contributing to the performance, effectiveness, or accountability of educational activities and programs (reporting to a program board, learning needs analysis, risk management, peer review, and educational evaluation). The OPL is working in collaboration with academia on some aspects that are directly related to the profession (see hereafter).

Clinical governance allows health professionals to improve the quality of their services and maintain a high standards of care for the best of the patient.<sup>[20]</sup> Clinical governance had been practiced by pharmacists for years and brought together.<sup>[21]</sup> It includes continuing professional development, audit (laws, accountability, and transparency), risk management, evidence-based practice, research, and development that the OPL is trying to implement.

### **Provision of paid services**

The OPL started implementing the change in the pharmacist role through the implementation of electronic platforms such as an electronic patient profile with medication therapy management,<sup>[22]</sup> medication safety, and pharmacovigilance system,<sup>[23]</sup> in addition to a drug shortage platform. Memorandum of understanding is being prepared to be signed with concerned parties. These electronic systems are expected to improve the quality of patient care.<sup>[24]</sup>

Negotiations have also started with concerned authorities (the MOPH in particular); for a change in the way, the community pharmacist fees are levied from the patient (pay per service in addition to the limited profit from the product), as in developed countries.<sup>[25]</sup>

### **Developing pharmacists' core and advanced competencies**

Efforts are being deployed to curb the exponential increase in pharmacy graduates to sustain the profession;<sup>[13]</sup> in parallel, adapting the graduating pharmacist profile to international competencies for better employability is being negotiated,<sup>[26]</sup> by acting in collaboration with academic institutions and concerned authorities. The OPL set and diffused the core competencies' framework for entry-level pharmacists, in addition to competencies for specialized pharmacists, as suggested by the FIP, the WHO,<sup>[27]</sup> and other organizations.<sup>[28]</sup> These competencies would allow adaptation of academic syllabi to international standards and local needs and are expected to improve the practice of graduates in the developing setting.<sup>[29]</sup>

### **Accreditation standards generation**

As in other developed and developing countries where efforts are being set up to optimize professional performance, the OPL is working on the generation and application of accreditation standards on community pharmacies to guarantee the quality of provided services<sup>[30]</sup> and those specific for academic institutions to improve the pharmacist education.<sup>[31]</sup>

### **New laws and decrees suggestions**

The order has also suggested new laws to concerned authorities, to be issued by the parliament and other

decision-makers, concerning clinical pharmacy application in hospital and community settings. Furthermore, implementing standard operating procedures and prescription guidelines for both the prescriber and the pharmacist have also been presented to concerned authorities and are waiting to be approved.

### **Continuing education consolidation and professional development**

Currently, the OPL is pursuing the implementation of the mandatory continuing education law (number 190, November 2011)<sup>[32]</sup> and is trying to enroll the highest percentage of pharmacists from all specialties. Turning continuing education general sessions into specific continuous professional development is ongoing: for hospital pharmacists, the order is organizing special sessions to help pharmacists in their accreditation endeavor.<sup>[33-35]</sup> For community pharmacists, sessions oriented toward soft skills acquisition are also being organized, particularly in the fields of marketing, management, and leadership.<sup>[36,37]</sup>

Focusing on the public health aspect of community pharmacy (health education and promotion, dental care, vaccination, and antibiotic resistance combating) in addition to the clinical aspect is also being addressed.<sup>[38,39]</sup> Adapting continuing education to address local needs was recommended by several authors and is expected to better serve the interest of the patient.<sup>[29]</sup>

### **Research- and assessment-based decisions**

The OPL conducted professional research and assessment to take appropriate decisions related to all aspects of the profession, some of which are still ongoing.<sup>[40,41]</sup> Several peer-reviewed publications have been generated from these projects. Patients' outcomes research,<sup>[42,43]</sup> products' quality, and other projects are also complementary for optimal changes in pharmacy image in Lebanon.

## **CONCLUSION**

The OPL should continue working on governance solutions that have started in 2016 and are still ongoing. The suggested solutions are expected to overcome challenges and barriers while leveraging the profession and advancing it to reach international standards.

## **AUTHORS' CONTRIBUTION**

Hala Sacre drafted the manuscript; Souheil Hallit assisted in drafting and reviewing the manuscript; Pascale Salameh proposed the concept and drafted the manuscript; all authors reviewed the final manuscript and gave their consent.

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Nil.



## Conflicts of interest

There are no conflicts of interest.

## REFERENCES

- American University of Beirut. Available from: <https://www.aub.edu.lb/AboutUs/Pages/history.aspx>. [Last accessed on 2018 Sep 8].
- Saint-Joseph University. Available from: <https://www.fp.usj.edu.lb/historique.php>. [Last accessed on 2018 Sep 8].
- Iskandar K, Hallit S, Raad EB, Droubi F, Layoun N, Salameh P, *et al.* Community pharmacy in Lebanon: A societal perspective. *Pharm Pract (Granada)* 2017;15:893.
- Kheir N, Zaidan M, Younes H, El Hajj M, Wilbur K, Jewesson PJ, *et al.* Pharmacy education and practice in 13 Middle Eastern countries. *Am J Pharm Educ* 2008;72:133.
- Domiaty S, Sacre H, Lahoud N, Sili G, Salameh P. Knowledge of and readiness for medication therapy management among community pharmacists in Lebanon. *Int J Clin Pharm* 2018;40:1165-74.
- Lebanese Order of Pharmacists. Available from: <http://www.opl.org.lb/newdesign/mission.php>. [Last accessed on 2018 Sep 08].
- Hallit S, Zeenny RM, Sili G, Salameh P. Situation analysis of community pharmacy owners in Lebanon. *Pharm Pract (Granada)* 2017;15:853.
- Laws and Regulations. Lebanese Ministry of Public Health. Available from: <http://www.moph.gov.lb/ar/Laws/index/10#/Laws/view/19>. [Last accessed on 2018 Sep 08].
- Khanna I. Drug discovery in pharmaceutical industry: Productivity challenges and trends. *Drug Discov Today* 2012;17:1088-102.
- Hallit S, Sacre H, Sili G, Zeenny R, Salameh P. Is the pharmacy profession declining in Lebanon? Forecasts Until the Year 2050. In: OPL Deliverables: Summary of a mandate 2015-2018. Lebanese Order of Pharmacists publications, November 2018.
- Covvey JR, Cohron PP, Mullen AB. Examining pharmacy workforce issues in the United States and the United Kingdom. *Am J Pharm Educ* 2015;79:17.
- Cartes-Velásquez RA. Exponential growth of dental schools in Chile: Effects on academic, economic and workforce issues. *Braz Oral Res* 2013;27:471-7.
- Pion G, Kohout J, Wicherski M. "Rightsizing" the workforce through training reductions: A good idea? *Professional Psychology: Research and Practice* 2000;31(3):266-71.
- Salameh P, Hamdan I. Pharmacy manpower in Lebanon: An exploratory look at work-related satisfaction. *Res Social Adm Pharm* 2007;3:336-50.
- Mahoney DP. Toward a more ethical system of state and local government retirement funding. *J Public Budgeting Account Financ Manage* 2002;14:197-224.
- Cambridge Dictionary Online Version. Available from: <https://www.dictionary.cambridge.org/dictionary/english/governance#dataset-businessenglish>. [Last accessed on 2018 Jun 07].
- Kraay A, Mastruzzi M, Kaufmann D. Governance Matters III: Governance Indicators for 1996–2002. Informe de Investigación No WPS; 2003. p. 3106.
- Graham J, Plumptre TW, Amos B. Principles for Good Governance in the 21<sup>st</sup> Century. Institute on Governance Ottawa; 2003.
- Educational Governance. Available from: <http://www.knowledge.scot.nhs.uk/home/learning-and-cpd/about-education-and-learning/educational-governance.aspx>. [Last accessed on 2018 Jun 07].
- National Health Services. Clinical Governance Requirements for Community Pharmacy; 2012. Available from: [https://www.archive.psn.org.uk/data/files/PharmacyContract/Contract\\_changes\\_2011/Clinical\\_Governance\\_guidance\\_300312.pdf](https://www.archive.psn.org.uk/data/files/PharmacyContract/Contract_changes_2011/Clinical_Governance_guidance_300312.pdf). [Last accessed on 2018 Sep 8].
- Pruce D. Delivering clinical governance: the pharmacist's role. *Pharm J* 2000;265:661. Available from: <https://www.pharmaceuticaljournal.com/delivering-clinical-governance-the-pharmacists-role/20003446.article>. [Last accessed on 2018 Sep 8].
- The Lebanese Order of Pharmacists. Lebanese Advanced Patients Profile. Available from: <http://www.laphealth.com/Pharmacist/>. [Last accessed on 2018 Sep 8].
- Akel M, Ramia R, Hajj A, Hallit S, Lahoud N, Zaytoun A, *et al.* Medication Safety Spontaneous Reporting System: The Lebanese Order of Pharmacists Initiative. Bulletin of Faculty of Pharmacy Cairo University 2019. DOI: 10.1016/j.bfopcu.2019.02.001.
- Kramer JS, Hopkins PJ, Rosendale JC, Garrelts JC, Hale LS, Nester TM, *et al.* Implementation of an electronic system for medication reconciliation. *Am J Health Syst Pharm* 2007;64:404-22.
- Houle SK, Grindrod KA, Chatterley T, Tsuyuki RT. Paying pharmacists for patient care: A systematic review of remunerated pharmacy clinical care services. *Can Pharm J (Ott)* 2014;147:209-32.
- Oliver B. Assuring graduate outcomes. *Aust Learn Teach Counc* 2011;26:2012.
- Bruno A, Bates I, Brock T, Anderson C. Towards a global competency framework. *Am J Pharm Educ* 2010;74:56.
- American College of Clinical Pharmacy, Burke JM, Miller WA, Spencer AP, Crank CW, Adkins L, *et al.* Clinical pharmacist competencies. *Pharmacotherapy* 2008;28:806-15.
- Anderson C, Bates I, Brock T, Brown AN, Bruno A, Futter B, *et al.* Needs-based education in the context of globalization. *Am J Pharm Educ* 2012;76:56.
- Tiyyagura SR, Purnanand A, Rathinavelu MR. Assessment of good pharmacy practice (GPP) in pharmacies of community settings in India. *IOSR J Pharm* 2014;4:27-33.
- Toklu HZ, Hussain A. The changing face of pharmacy practice and the need for a new model of pharmacy education. *J Young Pharm* 2013;5:38-40.
- Sacre H, Tawil S, Sili G, Salameh P. Continuing Education for Pharmacists in Lebanon: Current Issues and Challenges. 2018. In: OPL Deliverables: Summary of a mandate 2015-2018. Lebanese Order of Pharmacists publications, November 2018.
- Iskandar K, Raad EB, Hallit S, Chamoun N, Usta U, Akiki Y, *et al.* Assessing the perceptions of pharmacists working in Lebanese hospitals on the continuing education preferences. *Pharm Pract (Granada)* 2018;16:1159.
- Ammar W, Wakim IR, Hajj I. Accreditation of hospitals in Lebanon: A challenging experience. *East Mediterr Health J* 2007;13:138-49.
- LeBlanc JM, Dasta JF. Scope of international hospital pharmacy practice. *Ann Pharmacother* 2005;39:183-91.
- Wakil E. Accountability Based Workplace: A Key to a High Performance Culture. Available from: <http://www.oplelibrary.com/Handler/downloadDocument.ashx?fid=12461>. [Last accessed on 2018 Sep 08].
- Wakil E. Soft Skills: Improve Your Communication. Available from: <http://www.oplelibrary.com/Handler/downloadDocument.ashx?fid=12612>. [Last accessed on 2018 Sep 08].
- Hajj A, Hallit S, Azzo C, Abdou F, Akel M, Sacre H, *et al.* Assessment of knowledge, attitude and practice among community pharmacists towards dental care: A national cross-sectional Lebanese survey. *Saudi Pharm J* 2019. [doi.org/10.1016/j.jsps.2019.01.010].

39. Lahoud N, Abdo R, Akel M, Safwan J, Henaine AM, Shdeed R, *et al.* Knowledge, attitudes and behaviors towards antibiotics use among Lebanese adults: An awareness survey on antibiotic resistance. 2018. In: OPL Deliverables: Summary of a mandate 2015-2018. Lebanese Order of Pharmacists publications, November 2018. Available from: <http://opl.org.lb/newdesign/pdf/OPL%20Deliverables.pdf>. [Last accessed on 2018 Dec 20].
40. Zeidan RK, Hallit S, Zeenny RM, Salameh P. Lebanese community-based pharmacists' interest, practice, knowledge, and barriers towards pharmacy practice research: A cross-sectional study, Saudi Pharmaceutical Journal. doi.org/10.1016/j.jsps.2019.02.002.
41. Tawil S, Sacre H, Sili G, Salameh P. Patients' Perceptions Regarding Pharmacists' Healthcare Services: The Case of Lebanon. 2018. In: OPL Deliverables: Summary of a mandate 2015-2018. Lebanese Order of Pharmacists publications, November 2018. Available from: <http://opl.org.lb/newdesign/pdf/OPL%20Deliverables.pdf>. [Last accessed on 2018 Dec 20].
42. Hajj A, Hallit S, Ramia E, Salameh P; Order of Pharmacists Scientific Committee – Medication Safety Subcommittee. Medication safety knowledge, attitudes and practices among community pharmacists in Lebanon. *Curr Med Res Opin* 2018;34:149-56.
43. Ramia E, Zeenny RM, Hallit S, Salameh P; Order of Pharmacists Scientific Committee – Medication Safety Subcommittee. Assessment of patients' knowledge and practices regarding their medication use and risks in Lebanon. *Int J Clin Pharm* 2017;39:1084-94.