

Good Pharmacy Practice Standardized for Community Pharmacists: The Lebanese Order of Pharmacists Initiative

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Received: May 2018.
Accepted: December 2018.

ABSTRACT

Objective: The community pharmacist's role is in constant evolution. It shifted from compounding and dispensing to patient-centered services. To guarantee that all pharmacists are providing a service of appropriate quality to every patient, the Lebanese Order of Pharmacists (OPL) took the initiative of developing good pharmacy practice (GPP) guidelines to be applied by community pharmacists for services' quality improvement. **Methods:** Within the OPL, a Scientific Committee, the executive authority to organize scientific and educational activities, is appointed. It decided, in January 2018, to elaborate GPP guidelines for community pharmacists and created the Community Pharmacy Practice Subcommittee, which was in charge of this project. The GPP standards suggested by the OPL were inspired by the ones published by international organizations, namely the International Pharmaceutical Federation and WHO, American, European, and regional countries. **Findings:** The GPP standards comprised 15 sections that tackled the following topics: settings of a pharmacy, handling of stock, extemporaneous compounding, provision of medicines, supply of nonprescription medicines, interaction and communication, documentation systems, equipment, resources, health promotion, diagnostics, pharmacotherapy monitoring, research and professional development, trainees, and para-pharmaceuticals. **Conclusion:** The OPL was able to implement a first draft of the GPP standards for community pharmacists in Lebanon, a developing country with many constraints. The starting project will need to be consolidated by raising awareness and changing misconception among community pharmacists as a first step. Amendments to these guidelines will follow based on the pharmacists' feedback and results of an ongoing national survey conducted by the OPL and academia.

KEYWORDS: Community pharmacists, good pharmacy practice, guidelines, Lebanon

INTRODUCTION

The pharmacist's role is in constant evolution, and it shifted from drug compounding and dispensing to providing drug information and patient care.^[1] This entire scope of patient-centered services has been described as pharmaceutical care, a revolution in pharmacy practice.^[2] All pharmacists have to ensure that the service they provide to every patient is of appropriate quality. The good pharmacy practice (GPP) includes the principles of pharmaceutical care^[3] and is considered a means of meeting and clarifying these obligations.

The International Pharmaceutical Federation (FIP) is a global federation of national organizations that represent pharmacists and pharmaceutical scientists. Its role is to provide leadership for national pharmaceutical organizations and encourage them to focus the attention

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How to cite this article: Hallit S, Sacre H, Sarkis H, Dalloul N, Jaoude CA, Nahhas Z, et al. Good pharmacy practice standardized for community pharmacists: The lebanese order of pharmacists initiative. J Res Pharm Pract 2019;8:29-32.

Access this article online

Quick Response Code:



Website: www.jrpp.net

DOI: 10.4103/jrpp.JRPP_18_96

of the pharmacists in the community and hospital pharmacy sector on developing the elements of service they provide to meet changing circumstances. The GPP guidelines are present in many countries, including but not limited to Australia, South Africa, Thailand, USA, Jordan, and France, but not Lebanon.

Lebanon is a small country in the Middle East with a population of around four million inhabitants. By the end of 2017, it had 3174 community pharmacies and a ratio of 6.48 pharmacies per 10,000 inhabitants. To be allowed to practice, all Lebanese pharmacists must be registered at the Lebanese Order of Pharmacists (OPL). The latter is working to become a leading institution to improve the profession of pharmacy, promoting excellence in patient care and scientific development in Lebanon and the Middle East. It strives to apply the laws, defend the rights of pharmacists, and advance the level of the pharmacy practice while fostering the development of scientific competencies.

The initiative of establishing GPP guidelines for community pharmacists was based on several elements of evidence; the general population in Lebanon has a high expectancy from community pharmacists, but their services are not always well perceived.^[4] Furthermore, few community pharmacists use the available electronic platforms^[5-8] that were made available to them by the OPL (medication safety platform for adverse events reporting, patient profile platform for medication therapy management, and learning management system for continuing education).

Thus, a regulatory framework for quality improvement of community pharmacy was needed. Based on those above, and since a comprehensive, culturally adapted, and well-structured GPP guideline for community pharmacists lacks in the country, the OPL took the initiative of developing these GPP guidelines to be used by community pharmacists.

METHODS

The Lebanese Order of Pharmacists initiative: Procedures and steps

The OPL is the official legal partner of the Ministry of Public Health (MOPH) to organize and supervise the pharmacy profession. It was established by law in 1950. All registered pharmacists (8121 active members) in Lebanon elect the governing body of the OPL every 3 years. Within the OPL, a nominated scientific committee has the role of executive authority to organize educational activities including conferences, educational sessions, and certifications. In January 2018, the OPL Scientific Committee decided to elaborate GPP guidelines for community pharmacists and created the

Community Pharmacy Practice Subcommittee, which was in charge of this project.

Creating the Community Pharmacy Practice Subcommittee

A call for volunteer service on the Community Pharmacy Practice Subcommittee has been out at the beginning of 2018. Invited pharmacists were pharmacy practitioners in the community settings. The final structure of the subcommittee included eight pharmacists, with long expertise in the community pharmacy practice.

Designing the good pharmacy practice guidelines for community pharmacists

To create the Lebanese GPP guidelines, we relied on the guidelines already implemented in several countries and tailored them to the Lebanese situation. The reference structure adopted to develop these guidelines was the one of the FIP-WHO to which standards from the following countries were mapped: Canada,^[9] Australia,^[10,11] Jordan,^[12] South Africa,^[13] Taiwan,^[14] and France.^[15] After mapping, a synthesis of standards and criteria was elaborated; a new round of brainstorming was launched to adapt the guidelines to the current context. This also allowed adding sections based on decisions of the OPL board and other projects developed by other subcommittees, i.e., the post-graduate training section, the Lebanese Advanced Patient Profile, and the Medication Safety online reporting platform.

RESULTS

The Lebanese GPP guidelines for community pharmacists' document that was prepared by the Community Pharmacy Practice Subcommittee can be found in Appendix 1. The major headlines that compose it are summarized in Table 1.

DISCUSSION

The OPL took the courageous step of creating the GPP standards for community pharmacists for the first time in the history of profession in Lebanon. These guidelines are essential for the pharmacy practice to ensure that, in Lebanon, the quality of the community pharmacy services is high and close to the worldwide standards. Before launching the GPP guidelines, a series of educational activities must be delivered to increase the pharmacists' awareness to these practices, spread the safety culture, and arm the attendees with the minimum necessary terminologies and background to be able to support and take part of this initiative. The OPL is currently running a national survey to assess GPP in community pharmacies in Lebanon, jointly with the academia. This survey will help implement the guidelines more solidly to promote the quality of services the community pharmacists provide.

Table 1: Summary of the headlines of the good pharmacy practice standards for community pharmacists

Settings of a pharmacy (appearance and cleanliness, accessibility, window dressing, dispensing, and counseling areas and staffing)
Handling of stock (purchasing, storage, and maintenance of quality)
Extemporaneous compounding (operating procedures, documentation, and raw material handling)
Provision of medicines (prescription availability, patient identification, and dispensing)
Supply of nonprescription medicines (advice on selection and use, responding to minor ailments)
Interaction and communication (communication skills of pharmacist and staff, provision of advice, promotion of good health, and provision of written information)
Documentation systems (patient medication profile, formulary systems, policies and standard operating procedures, documentation of interventions)
Equipment (availability of a refrigerator and other equipment, equipment status, routine maintenance, and validity)
Resources (availability of drug information systems and resources)
Health promotion (engagement in health promotion, participation in health promotion campaigns)
Diagnostics (provision of diagnostic tests, documentation of tests done)
Pharmacotherapy monitoring (development of pharmaceutical care plans, patient monitoring, identification of medication-related problems, interaction with prescribers, and other healthcare professionals)
Research and professional development (participation in research projects, participation in continuing education)
Trainees (acceptance of trainees, monitoring and documentation, activity description)
Para-pharmaceuticals (availability of medical devices and complementary medicines, display, information)

These GPP guidelines were submitted to the MOPH for further discussion and approval before implementation. The launching is set to take place as soon as the approval of the MOPH is granted. Adhering to the GPP standards will be optional during the preliminary phase of the guidelines implementation, to be perceived as a quality label mark; it would become mandatory after the trial period.

Training and workshops are warranted to all pharmacists with the collaboration of the MOPH. As drug experts, and as part of their professional responsibility, pharmacists are urged to abide by these GPP guidelines. The most significant incentive would be to optimize patient care.

The OPL was able to generate a first version of the GPP standards for community pharmacists in Lebanon, a developing country with many constraints. The starting project will need to be consolidated by raising awareness among community pharmacists as a first step. Amendments to these guidelines will follow based on the pharmacists' feedback and results of the ongoing national survey.

AUTHORS' CONTRIBUTION

All authors contributed equally to the elaboration of the GPP standards as they all were members of the OPL community pharmacy sub-committee.

Souheil Hallit drafted the manuscript, and reviewed the manuscript; Hala Sacre also drafted the manuscript and corrected it linguistically; all authors reviewed the final manuscript and gave their consent; Pascale Salameh was the project supervisor and approved the final version of the manuscript.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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GOOD PHARMACY PRACTICE STANDARDS IN COMMUNITY PHARMACIES

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The OPL Scientific Committee

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Beirut - November 2018

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INTRODUCTION

As the pharmacist's role is changing from compounding and dispensing to providing drug information and patient care, the OPL decided to go together with these changes, by empowering the pharmacist in Lebanon to offer such modern services. The entire scope of patient-centered services has been described as pharmaceutical care, a revolutionary approach in the pharmacy practice. All pharmacists have to ensure that the service they provide to every patient is of appropriate quality. The principles of pharmaceutical care are described in the concept of Good Pharmacy Practice (GPP), a means of meeting and clarifying these obligations. The GPP standards suggested by the OPL are inspired by the ones published by international organizations, namely the FIP & WHO, and some American, European and regional countries.

1. SETTINGS OF A PHARMACY

Appearance and Cleanliness

- In general, a pharmacy should inspire confidence and portray a professional image. It should be well lit, tidy, clean, and should be organized in an orderly fashion.
- Material from which the pharmacy is made of (shelves, walls, countertops, etc...) should be easy to clean that is covered with a washable material.
- Practice site should be neat, clean, and organized to maintain and project a professional appearance.
- The premises should regularly be maintained, protected from pests and rodents, and disinfected if necessary.
- No noise or annoying odors.

Accessibility:

- The pharmacy itself should be accessible to all people including disabled persons:
 - At least one parking space should be dedicated to the customers of the pharmacy as per the Minister of Interior and municipalities decision.
 - Replacement of stairs with a ramp, having a parking space for handicapped, dispensing counters easily accessible to all people.
- Prescription medications and controlled substances should not be accessible to the patients/public. Patients circulation area should be very well separated from the rest of the pharmacy premises.

Window dressing

- The name of the pharmacist/owner or pharmacist in charge should be displayed in Arabic (another language is recommended) and well visible over the entrance of the pharmacy.

Dispensing area

- Is a semi-private area that should have a suitable and effective means of heating or cooling as well as appropriate ventilation and lighting (as in all the pharmacy).
- Products should be well separated and well visible (no matter how small the pharmacy is), to decrease the risk of errors while dispensing.

Counseling area

- There are three models depending on the services the pharmacy provides as well as the degree of privacy needed: a) semi-private area; b) private area; c) consultation area for screening. The private area is suitable for discussion of confidential information. It is an area separated from the rest of the pharmacy where clinical information is present and accessible to the patient. It is an area where measurement, screening and monitoring is done (e.g. BP, HGT). It is also the area where advice and information are exchanged. As such, this area should be properly planned and furnished to serve its purpose.

Staffing

- In general, a pharmacy is staffed with pharmacists and support staff where each is delegated an appropriate work, to deliver quality services.
- All staff members should present a complete file to the employer including: a criminal record (سجل عدلي), a curriculum vitae, and diplomas.
- Each staff member is delegated an appropriate work, to deliver quality services. The pharmacist may delegate functions to pharmacy technicians, especially administrative activities in order to be more involved in patient-centered care, such as counseling services.
- A written job description is prepared for all staff and should be related to the training of each staff member.
- All staff members should be acquainted with their job description, title (function) and responsibilities.
- All staff members work under the Lebanese labor law. Their job description should be consistent with regulations and policies (NSSF, vacations, transportation, etc..).
- All staff members should have a written agreement where all rights of employer and employees are preserved.
- The pharmacist owner/in charge has to communicate in a convenient and respectable manner with other staff members, and listen to their opinions.
- Performance objectives should be set annually and an appraisal should be done on annual basis for each staff member.

2. HANDLING OF STOCK

Purchasing of stock

- The pharmacist should have a sound financial management of the stock (and the pharmacy in general).
- Procurement process for medicines and controlled substances should be transparent and should be supported by written policies.
- Procurement should be done by pharmacists who rely on information systems to estimate the need of products and depends on the available stock and expiry dates.
- Procurement should be done through reliable and credible sources (agents, general drugstores and warehouses etc.)
- Procurement of medicines can be done using many ways: phone request, online ordering, by the representative of each agent etc.
- Narcotic and psychotropic medicines require special request forms (provided by MOPH).
- Procurement process should take into consideration the payment deadline, to be able to pay on time and have a good reputation in terms of payments.
- Written policies and contingency plans that deal with shortages should be developed in order to have an uninterrupted supply of medicines. As such, a pharmacy ensures product availability as well avoid stock outs.

Storage of stock

- The proper storage conditions for all medicines, including controlled substances is required.
- Controlled substances should be kept in a locked metal cupboard.
- Medications that require refrigeration should be stored in a refrigerator dedicated to pharmaceuticals while respecting the following conditions:
 - Medications should be evenly distributed on the shelves to allow proper ventilation and refrigeration
 - Do not store medications in the door rack, and on the first shelf as it is warmer than other parts of the refrigerator

- Do not store medications near the back of the refrigerator as it is colder than other parts of the refrigerator
- Keep a log of the temperature
- There should be enough shelves/drawers to store the medications in an orderly manner, to easily locate them. The pharmacist is free to choose the way that suits him/her best: alphabetical order, therapeutic class, dosage form, importer...
- To avoid dispensing errors, look-alike medications should be stored in separate storage areas.
- Storage areas should maintain the integrity of the products.
- Storage of medicine should be maintained at the right temperature, away from humidity, and direct sunlight, protected from pests and rodents. These conditions should be maintained and verified at all times.
- Products should be stored on enough shelves in an orderly fashion where they are easy to locate. Those shelves should be easy to clean, above floor level, and secure.
- To note that pharmacists should mention proper storage conditions to the patient during counseling along with other requirements.

Maintenance of Quality (expired and recalls)

- Procurement should be supported by quality assurance where falsified, counterfeit, unlicensed or substandard medicines are not allowed.
- Written policies for procurement and storage should be available to guide the pharmacist.
- Guidelines or policies for effective batch recalls, whether for defective or warnings, should be available to maintain the integrity of the medicine.
- Regular monitoring of the medicines inventory should be conducted and inspection of expiration dates of products as well as samples should be done on a regular basis by checking the list of near-expiry-date medications and samples, retrieved from the computer program but also by checking manually the medications and other health products for their expiry dates, and remove concerned products.
- Pharmacists should ensure that recalled and expired products are stored separately to prevent further dispensing.
- Connect with the OPL and the MOPH (through mobile applications) to receive latest information on drugs recalls.
- All expired products, even if not financially compensated, should be returned to the importer for safe disposal.
- Outdated controlled medications are under strict regulations and handled by a special commission for the disposal of expired controlled substances at the MOPH.
- Pharmacists should establish a safe way to dispose of waste and expired raw material, products and samples. Pharmacists should also provide information to patients on how to dispose safely any unwanted or expired product. Handling of sharp objects is of major importance: sharp objects contaminated with biological fluids (needles after detaching it from the syringe), should be placed in special yellow containers marked "SHARP". Once full, the container is sent to any branch of "Arc-en-Ciel", the only organization in Lebanon to handle this kind of waste.

3. EXTEMPORANEOUS COMPOUNDING

Definition

The term extemporaneous includes:

- "magistral preparation" (compounded product) is any medicinal product prepared in the pharmacy according to a medical prescription, intended for a given patient, or extemporaneously.

- “official/pharmaceutical preparation” means any drug prepared in pharmacies, registered in the pharmacopoeia or Codex and intended to be dispensed directly to patients provided by this pharmacy.

Operating procedures

- Analyzing the prescription and ensuring the feasibility of the preparation
- Preparation areas appropriately designed and maintained to permit ease of preparations, minimize potential errors, assure cleanliness and safety of products.
- Compounding must be done under the direct supervision and responsibility of a pharmacist. All compounding processes must be in accordance with SOPs authorized by a pharmacist.
- Pharmacists should ensure that compounded medicines are consistently prepared to comply with written formulas and quality standards for raw materials, equipment and preparation processes, including sterility where appropriate.
- The raw materials (active ingredients, excipients) that compose the preparations are identified and their traceability is organized. These must meet the specifications of the pharmacopoeia.
- The pharmacist informs the patient of the time required to perform the preparation.
- The preparations are recorded in a prescription book (ordonnancier) as per the Lebanese law (Art. 31, 41, 43-60).
- The pharmacist can decline the act of preparation only for legal reasons, or when the preparation is dangerous or non-compliant with the scientific, medical and technical knowledge, or by lack of appropriate technical means.
- Labeling of compounded material should be appropriate and mention the expiration dates, the storage conditions and other relevant information as per the Lebanese Pharmacy Practice law.

Documentation

- Records must be kept during the process which demonstrate that all the steps required by the defined procedures were taken and that the quantity and quality produced were those expected.
- A worksheet is used to record the approved pharmacopoeia name (where applicable), formula and its source, the strength/amount of any preservative used, the source, batch number and expiry date of ingredients used, the procedure used, instructions for use, and the date of preparation released for each product.

Raw material handling

- The pharmacist should ensure the correct materials (including quality raw material), containers and labels are used in compounding.
- Protective clothing (such as a laboratory coat, disposable gloves, and a hair cover) are used and additional precautions are taken (such as eye protection and a dust mask) when compounding high-risk substances.

4. PROVISION OF MEDICINES

Prescription availability

- Do not contract with any insurance company or group for the provision of medicines unless approved by the OPL
- Reception of the prescription and evaluation of its legality and authenticity.
- Only the unified medical prescription should be accepted (previous format of prescriptions is still accepted from dentists and veterinarians).
- Checking the validity (date) and the clarity of the prescription.

- Checking the identity of the prescribing doctor.
- Not to dispense false and illegal prescriptions and return them to patients.
- Review of the medicines listed to ensure:
 - Conformity of the complaint with the indication of prescribed drugs.
 - No duplication nor overlapping between drugs.
 - Pharmaceutical form and dosage are appropriate for the patient
- Review of lab tests if any.
- Refer to the doctor to check the medicines in case of any doubt or in case of any recommendation concerning the drug or drug dosage or form.
- For prescriptions related to narcotics or psychotropic drugs, application of related laws and regulations.
- Last refill reminder for patients to see their doctors for review and a new prescription if appropriate.
- The prescription has to be filled and stamped for the NSSF (and insurance companies), with the provision also of the adequate pharmacy receipt.
- Filing of the pharmacist's copy (pink) of the unified prescription even if not legible, awaiting improvements from the MOPH. *In case of psychotropic drugs, the white copy of the prescription may be kept/photocopied since the pink one is not readable.*

Patient identification

- Pharmacists should ensure patient confidentiality.
- Get information about:
 - Gender/age
 - Drugs currently taken by the patient
 - Medical History
 - Family Background
 - Patient's lifestyle/food habits to avoid interactions with the prescribed drugs

Dispensing medication

- Phase 1: checking of the prescription (as described above)
- Phase 2: Preparation of the prescribed medicines. Make sure of drug name, pharmaceutical form and dosage. When it is necessary and under defined conditions as per the Lebanese Pharmacy Practice Law, the pharmacist can recommend generic substitution through the Unified Medical Prescription: substitute an expensive brand medicine by a generic less expensive one (or a generic drug by a local one less expensive).
- Phase 3:
 - Provide information and instructions to the patient, orally and written on the boxes, concerning:
 - ✓ Indication
 - ✓ Dosage and method of use
 - ✓ Warning instructions
 - ✓ Most common side effects
 - ✓ Storage conditions
 - ✓ Duration of therapy: if treatment involves many boxes notify the patient. The patient will decide if he/she wants to purchase them all at once or subsequently, after finishing each box.
 - Ensure that the patient understands the information provided by asking him/her to explain what he/she understood in his language.
 - When the prescribed medication is an antibiotic powder for suspension, clearly explain to the patient the method for diluting it. In case the patient asks the pharmacist to do it, the latter should use freshly opened bottled mineral water or properly stored distilled water.

- Stamp the prescription with the pharmacy stamp and write the date of the dispensation.
- In case of the presence of many prescriptions for different patients, the name of the patient should be written on the dispensed drugs and the medication with the related prescription should be put in separate bags for each patient, to prevent errors.
- Phase 4: In case of availability of the patient profile software, write down the patient's drugs that were dispensed. Update the patient's pharmacological data.
- All relevant information and counseling (warnings, side effects, dosing information...) can be done in written on a separate sheet of paper preferably typed. Providing written information on stickers/labels is not allowed since it is considered as relabeling as per the Lebanese law.
- When dispensing psychotropic or narcotic medicines, registers (provided by the MOPH) should be updated and in accordance with the available stock of those medicines in the pharmacy.
- The last phase is the remuneration of the pharmacist for the services provided. The pharmacist charges the patient for the dispensed medicines according to the latest MOPH public price list and in respecting article 80 of Lebanese Pharmacy Law.

5. SUPPLY OF NON-PRESCRIPTION MEDICINES

Advice on selection and use

- Adhering to the ethics of the profession is a must
- Help the patient to choose the most appropriate treatment for him/her in terms of active substance, concentration, pharmaceutical form, dosage and cost.
- Provide information on the safe and appropriate use of drugs (whether recommended by the pharmacist or in case of self-medication) taking into consideration the drugs already taken by the patient.

Responding to minor ailments

- In the case of a minor self-limiting health problem, appropriate advice must be given and a proper non-prescription/supplement medicine recommended only when necessary, with referral to medical support when indicated.
- Provide the necessary first aid when needed

Referral when necessary

It is important to adhere to the ethics of the profession when referring the patient. The pharmacy should have a list of health care providers (preferably located in the area around the pharmacy).

6. INTERACTION AND COMMUNICATION

Communication skills of pharmacist and staff

- The pharmacist must assess each patient's ability to understand the information imparted by question and answer and must be able to modify his/her approach accordingly.
- Ensure that the patient understands the information provided by asking him/her to explain what he/she understood in his language.
- Care should be taken with counseling where understanding is likely to be a problem.
 - While providing information to patients, health literacy should be considered.
 - Be aware of medicines that are confusing (sound-alike, look-alike).
- If the prescription is not clear, communicating with the physician is recommended.

Provision of advice

- Adopt an empathetic behavior with patients.
- Ensure a suitable environment that will provide confidentiality and put the patient at ease, especially with regard to sensitive information.
- Provide enough information to patients for their participation in the decision-making process, thus respecting their right to decide.
- Counseling on medication adherence to have the best possible results
- Counseling on how to use medical devices (i.e. inhalers)
- Creating methods of communication with the pharmacist to ask his questions (email, WhatsApp, etc.)

Promotion of good health

- The Pharmacist is a key player in public health because of his/her daily contact with patients and his/her up to date information.
- He/she is in a position to provide information regarding:
 - Healthy lifestyle: nutrition, smoking cessation, physical activity, weight control
 - Healthy and safe pregnancy
 - Infant health and nutrition
 - Travel health support
 - Sexual health
 - Venous disease support (contention stockings and pantyhose)
 - Stress management

Provision of written information

- Written information must be used to supplement verbal communication as appropriate (as previously mentioned).

7. DOCUMENTATION SYSTEMS**Patient medication profiles**

- Pharmacists should record personal details and complete a medication history to establish a patient profile.
- Pharmacists should document patient profiles as well as all necessary clinical data to assess and monitor medication therapy.
- Patient medication profiles could be manual or preferably electronic based.
- Medication profiles should respect patient privacy.
- Those records should be readily retrievable, allow pharmacists to identify disease conditions and medication history, enable the pharmacist to determine impact of previous diseases and medicines on new prescription being filled.
- Pharmacists should ensure that formulary systems, when available, are linked to treatment guidelines and protocols

Policies and standard operating procedures

- Pharmacists should establish and implement standard operating procedures for different operations.
- Policies and procedures should also be set to ensure information systems that maintain all information.
- Information systems should be validated and routinely tested, updated and backed-up.
- Pharmacists should have a continuity plan and reliable recovery plan in case information system fails.
- All this pharmacy practice information data should be secured and protected from unauthorized access.

Documentation of interventions

- Pharmacy practice should have policies and procedures for documenting pertinent patient counseling, recommendations or interventions made to determine effectiveness of pharmaceutical care and to facilitate continuity of care.
- Pharmacists should attempt to detect and document adverse effects of drugs at early stages and drug toxicities.
- Any reaction or adverse effect whether possibly or definitely drug-related should be reported, using the Medication Safety platform developed by the OPL.
- Pharmacists should keep records and allow access to such information keeping in mind that confidentiality should be maintained at all times.
- Pharmacists should perform retrospective and prospective drug utilization reviews.
 - Pharmacists should utilize those reviews to provide additional information that may supplement and support patient counseling.
 - As such, the additional information would help the patient to understand better the therapeutic plan and improve patient's adherence to treatment.
 - The additional information supplied by DURs can be delivered to patients not only in printed material but also by e-mail, telephone communication, text messages, reliable web sites, or other means of communication.

8. EQUIPMENT

Availability of refrigerator and other equipment

- The pharmacy should have a supply of electricity at all times.
- Measurement of humidity and temperature should be continuously done and maintained at appropriate levels for medications. In fact, not only the dispensing area should be of appropriate temperature and humidity but all the pharmacy including the storage area as well.
- An air-condition/heating system to keep ambient temperature between 15 and 25°C.
- The refrigerator should be equipped with a suitable thermometer which is capable of storing products at temperatures between 2°C and 8°C. It should be solely used for medicinal products.
- Locked cabinets for exclusive storage of specific drugs (narcotics)
- Specific area/locker reserved for expired goods
- Equipment adapted to the activity of preparation (scales, mixing devices, heating, pH control)
- Computer (hardware and software, internet)

Equipment state

- Equipment should be in line with the list required by the Lebanese law (Article 27)
 - Scales for weights ranging from one centigram to one kilogram.
 - A set of glass measures, graduated from ten cubic centimeters to one liter.
 - A refrigerator to store all items requiring refrigeration.
- The equipment should be clean and well-functioning.
- Equipment used for compounding should be cleaned before and after use.
- It is recommended to keep records of maintenance reports

Routine maintenance and validity

- The temperature of the refrigerator must be monitored and charted once or twice daily. A temperature monitoring system (temperature record sheet) makes it possible to verify and certify that these conditions are met continuously.

- The adequacy of equipment, both from a qualitative and a quantitative point of view, is evaluated periodically.
- Devices used for weighing or measuring should be calibrated and maintained according to a documented procedure.

9. RESOURCES

Availability of drug information systems and resources

- Pharmacists should maintain access to appropriate evidence data such as reference books, journals, standard treatment guidelines, and essential medicines lists.
- Internet access is recommended in addition to an active OPL e-Library account
- A wider range of reference material should be available in pharmacies approved for post-graduate training. Electronic access to the required references is also acceptable.
- Use the internal leaflet of the drug, and reliable scientific references available to the pharmacist in case more information about the medicine or the disease is needed.
- Provision of medicine information for prescribed, non-prescribed and complementary medicines as part of a counselling process, including:
 - Consumer Medicines Information (CMI)
 - Government & Professional Organization information resources
 - Reference to reliable websites
- As per Article 27 of the Lebanese law, the below is required to be available at the pharmacy:
 - The latest edition of the official lists and their annexes with the names and addresses of doctors, veterinary surgeons, dentists and midwives published by the MOPH.
 - The pharmacopoeia of the Lebanese Republic when issued. Until such time the pharmacy is to be supplied with the latest edition of the French, American or British pharmacopoeia
- Other references recommended to be available (or easy accessible):
 - The Pharmacy Practice Law book (OPL)
 - The Code of Ethics for the profession (OPL)
 - The Code of Ethics for Medicinal Products Promotion in Lebanon (MOPH or OPL)
 - The list of medications available in Lebanon (Lebanon National Drug Index, MOPH)
 - Drugs public price list (MOPH)
 - Drugs substitution list (MOPH)
 - The list of medications approved by the CNSS (OPL)

10. HEALTH PROMOTION

Engagement in health promotion

- Counseling on healthy lifestyles, prevention of diseases... is recommended for every patient.
- Counseling on addictive drugs (benzodiazepines, pseudoephedrine, anabolic steroids, etc.)
- Counseling on the importance of vaccination for children, adults and older adults
- Participate in vaccinations at their community pharmacies as recommended by international instances.
- Pharmacists should develop and/or distribute educational material that are applicable to a wide range of patient population, age group, and health literacy levels (but should not contain any publicity material to the pharmacy or the pharmacist as per the Lebanese law).
- Pharmacists should ensure that the information provided to patients and other health-care professionals is evidence-based, accurate, objective, understandable and appropriate.

- Pharmacists would assist patients and health providers to obtain and analyze information obtained.
- In-pharmacy promotion is allowed provided that it respects the Lebanese law (e.g. window or counter displays, counter mats, pharmacy TV)

Participation in health promotion campaigns

- Pharmacists should engage in preventive care activities that promote public health and prevent disease.
- Participate in structured programs to raise consumer awareness of public health issues such as breast cancer, colon cancer, Hepatitis C or alcohol misuse, smoking cessation...
- Participate in health education plans in collaboration with other health care providers and relevant authorities.
- Provide the necessary information to the community about methods of prevention of diseases and how to detect them early, and about their risk factors to avoid them.
- Assist in the follow-up of some diseases in society.
- The community pharmacy team's knowledge is systematically updated through continuing education activities and if necessary, according to the campaigns' themes

11. DIAGNOSTICS

Provision of diagnostic tests

- Pharmacists may provide point-of-care testing and screening activities in order to monitor and adjust therapy when needed. The pharmacist may do all tests that can be performed by the patient himself at home, such as:
 - Blood pressure
 - Body weight and height
 - Glucose and blood lipids
- In case of providing these services, the pharmacist should regularly calibrate and maintain the equipment used for testing.
- If the results of these tests are not within the desired range, patients are advised to seek medical consultation, and adequate recommendations on lifestyle are provided.

Documentation of tests done

- Test results should be documented in the Lebanese Advanced Patient Profile platform.

12. PHARMACOTHERAPY MONITORING

A pharmacist should have input into decisions. A system should exist that enables pharmacist to report and obtain feedback about adverse effects, medication misuse, errors, defects, etc. was developed. This is only feasible if the online system profile is implemented in all pharmacies.

Development of pharmaceutical care plans

- Upon recognizing any problem, the pharmacist must take the appropriate steps which could include the development of a care plan to avoid or resolve the problem(s).
- The pharmacist should identify patients who need follow-up and cooperate with them and with caregivers and health care providers to develop a health care plan for these patients and ensure that everyone understands it.

Patient monitoring

- The pharmacist can establish outcomes to be assessed during follow-up which may be conducted by a specialized pharmacist.

- The last step of the care planning process is to schedule a time to conduct a follow-up evaluation. A follow-up evaluation is a patient encounter, either in person or by telephone, which allows the pharmacist to collect necessary information to determine whether the actions and interventions taken during the assessment and care planning have produced positive results.
- Routine discussions with the patient's medical practitioner or other health care professionals might also be necessary.
- Pharmacist should monitor therapeutic outcomes and record all changes made by the physician or patient. Pharmacists should assess progress and monitor for any new problems. This is only feasible if the Lebanese Advanced Patient Profile platform is implemented in all pharmacies.
- Reminders to see their doctors: This is only feasible if the online system profile is implemented in all pharmacies.
- The pharmacist should help in using specific devices: inhalers, insulin injections...
- For patients taking multiple medicines, the pharmacist can help in filling Dose Administration Aids (compartmentalized units) to improve patient adherence to the treatment.
- Medicines use reviews (MUR) and Medication Therapy Management (MTM) should be done for patients taking multiple medicines or having newly diagnosed disease with the aim of enhancing the quality use of medicines and reducing the risk of ADE through the Lebanese Advanced Patient Profile platform available online: <http://lapphealth.com/Pharmacist/>

Identification of medication-related problems

- The pharmacist should identify medication-related problems such as medicine/allergy interactions (i.e. the significant potential for or the occurrence of an allergic reaction as a result of medicine therapy), therapeutic duplication of medicine, adverse medicine interactions, common severe side or adverse effects or interactions and therapeutic contraindications, etc.
- The pharmacist is advised to use the Medication Safety platform developed by the OPL, promote the pharmacovigilance culture and encourage patients to report adverse effects for better therapy management. It is the Medication Safety platform available online: <http://opl.org.lb/medicationsafety>.

Interaction with prescribers and other healthcare professionals

- The pharmacist should establish relationship with health professionals (a therapeutic collaborative partnership). Interaction with other pharmacists should be as colleagues rather than competitors.
- The pharmacist must consult with the prescriber when it is deemed necessary to resolve a medicine-related problem.
 - Refer to the doctor to check the medicines in the case of any doubt or in the case of any recommendation concerning the drug or drug dosage or form based on new information related to the drugs or to the patient. Utilize evidence-based information to make recommendations on optimal drug therapy, appropriate drug use, dosage and route of administration.
 - Cooperate with doctors in case of lack of medication and provision of alternative, when there is a potential therapeutic problem
- All information should be stored and made accessible in a manner that facilitates effective pharmacist communications with other pharmacists, patients, caregivers, prescribers, other health care providers, or organizations.

13. RESEARCH AND PROFESSIONAL DEVELOPMENT

Participation in research projects

- Pharmacist can participate in education and research within the pharmacy setting. They can participate in different projects pertaining to their daily practice which helps in advancing the role of pharmacists in the healthcare system.
- Pharmacists are encouraged to report their finding at conferences or related activities to achieve better professional performance.
- Pharmacists can participate in directly observed therapy programs in areas in management of drug addiction, HIV, TB, STDs...

Participation in continuing education

- The pharmacist has to undertake continuing education as per the Lebanese Pharmacy Practice Law (N°190, November 2011). Continuing education should be perceived as being a life-long process aiming to improve knowledge, skills and performance.
- The pharmacist should follow a continuous professional development program throughout the period of practicing the profession and contribute to the development of others: Understand the concept of continuous pharmaceutical development and follow up developments in the profession.
- Pharmacist should be informed and updated on changes related to the information of medicinal products.
- The pharmacist owner/in charge should ensure the competency of the pharmacy staff through continuing education.
- Pharmacists should be able to demonstrate evidence of continuing education or continuing professional development to improve clinical knowledge, skills and performance.

17. TRAINEES

Acceptance of trainees

- Accepting pharmacy students is optional but recommended
- Only pharmacists enrolled and up-to-date with the continuing education program are allowed to accept trainees.
- Number of trainees depends on the pharmacy surface area and the number of registered pharmacists working in that pharmacy and available to supervise the trainees.
- The pharmacist should supervise the work of the trainees and ensure it meets the requirements of pre- and post-graduate trainings that are set by the OPL.

Monitoring and documentation

- The pharmacist is advised to keep records of the trainees he/she accepts

Activity description

- Trainees may perform all of the services or acts pertaining to the scope of practice under the direct personal supervision of a community pharmacist.

18. PARA-PHARMACEUTICALS

Availability of medical devices and complementary medicines

- Every pharmacist (owner or in charge) shall be responsible for the purchasing, receiving and storage of complementary medicines and medical devices in the pharmacy.
- Parapharmaceuticals should be purchased from reliable sources, according to the MOPH regulations.

- Value medical devices at the pharmacy. The pharmacist must ensure the availability in the pharmacy of a database of medical devices with modalities of care.
- Providers are sought for the rental of medical devices that the pharmacy did not choose to hold in stock.

Display

- Display and promote complementary medicines and therapeutic devices in a professional and ethical manner.
- Para-Pharmaceuticals should not be falsely or over advertised. Ensure that advertising materials are evidence based, and do not promote excessive or unnecessary use of complementary medicines or therapeutic devices.
- Consider the influence of promotion (display or advertising materials) on patients' perception of the efficacy of complementary medicines and therapeutic devices, and respond appropriately.

Information

- Follow a systematic and safe approach to the provision of complementary medicines and therapeutic devices.
- Provide professional advice and information on the safe and appropriate use of complementary medicines as part of a patient's health management plan. To this aim, pharmacists should take steps to update their knowledge and skills about complementary and alternative therapies such as traditional Chinese medicines, health supplements, acupuncture, homeopathy and naturopathy.
- The pharmacist carries out the delivery of the medical device (self-measurement device, aerosols, chair, ...) with the associated use conditions. The adequacy of medical devices to the needs of patients is evaluated. Access evidence-based resources about (disease states, medicines), therapeutic devices and lifestyle solutions to support service delivery.
- The pharmacist provides counseling and information to patients to support the safe and optimal use of medical devices. The training of the patient with demonstration of the use of the device, advice of conservation and maintenance is carried out during the delivery. Use appropriate techniques to ensure patient understanding of counseling provided, and confirm that they can use the therapeutic device correctly. The correct use of the medical device is evaluated. The pharmacist informs the patient of the reimbursement conditions, if any.
- The pharmacist ensures the skills of the pharmacy team concerning the use of the medical devices proposed by the pharmacy. He (or she) possibly designates one or more responsible for demonstrating / training the patient. When ordering a new medical device, its operation must be controlled before delivery.
- For delivering a medical device requiring measurement and fitting: The delivery and installation of orthoses are carried out in a suitable room (if necessary by appointment), preferably in the morning (for the "contention"). The pharmacist can designate among the pharmacy team the persons authorized to take measurements and deliver orthotics. The advice of establishment and maintenance concerning the orthosis delivered is dispensed to the patient in a suitable vocabulary.
- The proper use of medical devices and patient satisfaction are assessed.
- A reasonable effort shall be made to record in the patient profile of all patients the use of relevant devices (e.g. self-testing, compliance devices, etc.), and herbal and homeopathic drug use.
- For cosmetic products: Provide adequate and individualized information for their use; emphasize the use of safe sunscreens to avoid sunburns and early skin aging and skin cancer with over exposure to the sun; provide information for the good choice of SPF.
- For weight loss products, claims of results must be realistic and obtainable.

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