

CONFERENCE ABSTRACTS

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Community pharmacy

Community pharmacist's reasons for non-use of mHealth in delivering online pharmaceutical practice: A study in Indonesia

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Community Pharmacy, one of the biggest health providers chains, is pivotal in addressing digital health implementation, especially in delivering health services. Mobile health (mHealth) applications have massively increased in Indonesia during the past two years. Meanwhile, utilization remains low, it is imperative to understand why community pharmacists do not use mHealth for online pharmaceutical practice. A cross-sectional study and a self-administered validated survey were employed. Data collection was disseminated through online surveys recorded using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The total sample that met the inclusion criteria was 92 participants who were dominated by females (75%) with an average age of around 27 years old and working experience of three years in a community pharmacy.

Interestingly, lack of public awareness and low intention to use mHealth in their region was the main reason pharmacists still did not yet administer mHealth for pharmaceutical practice. The lack of coordination and low integration of systems between health professionals and providers are the second highest reasons impeding mHealth application. These factors should be taken into account in designing mHealth interventions and promoting online pharmaceutical practice. Since mHealth has significant potential for enhancing population health, future studies should investigate a deeper understanding of community

pharmacists' awareness and acceptance of digital public health interventions practice.

Validation of self-assessment of community pharmacy services

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Background: Quality improvement measures, such as self-assessment tools, support community pharmacists in evaluating professional service provision and contribute to maintaining the quality of pharmacist professional services.

Purpose: The objectives were to identify established quality standards and analyse pharmacy services outcomes requirements, develop and validate a self-assessment tool for clinical community pharmacy services, and evaluate practicality of the self-assessment tool.

Method: The methodology involved: 1) identification of quality standards for professional community pharmacy services, 2) development of a self-assessment tool for community pharmacists, 3) content validation using a two-round Delphi study with a nine-member expert panel, where a mean score ≥ 4.5 was used as a threshold for acceptance, 4) reliability testing using the test-retest method performed by 10 pharmacists, 5) criterion validation using the 2017 Professional Practice Standards version 5 of the Pharmaceutical Society of Australia as the gold standard, and 6) implementation of the tool in 30 community pharmacies.

Results: Quality standards for professional pharmacy services were identified from Australia, Malta, the UK and the USA. The self-assessment tool developed consists of 7

domains namely: 1) professional practice; 2) patient care and medicine management; 3) dispensing practices and counselling; 4) collaboration with health care professionals and colleagues; 5) pharmacist training and professional development; 6) management of stock and pharmacy environment; 7) quality assurance and quality management. The self-assessment tool relies on performance rating using a Likert scale from 1 (Poor) to 5 (Excellent). Each domain consists of a self-reflection section where the pharmacist reflects to highlight strengths, weaknesses and plan for improvement. Following round I of the Delphi study, statements were amended according to the recommendations and all statements obtained a mean score greater than 4.5 after round II. Reliability testing resulted in a Cronbach's Alpha value of 0.991, indicating high internal consistency. For criterion validation, the paired sample t-test was applied. Domains 1, 2, 3 and 4 resulted in a p-value less than 0.05 implying a significant difference between scores of the tool developed in this study and scores of the gold standard. Criterion validation was established for Domains 5, 6 and 7 ($p > 0.05$). From the implementation study: 30% (n=9) of participants rated practicality of the tool as 'Excellent', while 7% (n=2) rated it as 'Poor'; 33% of the participants (n=10) rated applicability of the tool as 'Excellent', while 3% (n=1) rated it as 'Poor'. Most participants are likely to perform quality indicators (66%), participate in training (84%) and plan for training of pharmacy personnel (70%) to improve the quality of their pharmaceutical service.

Conclusion: The validated self-assessment tool may be used as a quality indicator for community pharmacies. The tool allows for accountability, continuous improvement and consistency in the provision of quality care and contributes to improved trust in the community pharmacist.

Development of a toolkit for community pharmacist-led diabetic patient clinical review

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Background: Community pharmacists are strategically positioned to support and empower diabetic patients to manage their condition and reduce long-term risks. Toolkits are useful to aid in the assimilation of evidence-based interventions in a practical scenario.

Purpose: To develop, validate and test the feasibility of a toolkit for community pharmacist-led diabetic patient review.

Method: A toolkit for community pharmacist-led diabetic patient review was developed in English and Maltese. The toolkit is intended to be completed by the community-based pharmacist via patient interview. The developed toolkit was validated for content relevance, comprehensiveness and presentation by an expert panel consisting of six members,

including a consultant diabetologist and endocrinologist, a general practitioner, a community pharmacist, a pharmacist in academia and two laypersons. Feasibility testing of the toolkit was conducted in a community pharmacy on 6 patients selected by convenience sampling.

Results: The validated toolkit consists of six sections: 1) assessment of patient current medications at baseline and plan of patient review session, 2) medication adherence and patient self-monitoring, 3) lifestyle including diet, nutrition, physical activity, smoking, alcohol consumption, sleep hygiene, 4) occurrence and monitoring of complications, such as eye and foot complications, 5) monitoring of laboratory investigations, and 6) referral for general practitioner or specialist review as necessary. For the feasibility testing, the first section of the toolkit was compiled at baseline through the electronic patient profile and any pharmaceutical care issues were identified. During the patient review session (t1), sections 2 to 6 of the toolkit were completed, a pharmaceutical care plan was developed for each patient to address issues, and interventions were proposed. A follow-up session (t2) was conducted after one month to assess actioning of the care plan. Mean duration (t1) was 14 minutes (range 11-18) and mean duration (t2) was 4 minutes (range 2-8).

Conclusion: The devised toolkit is feasible and has potential to strengthen pharmacist-patient relationship, support patient empowerment for them to have an active role in their health, and act as a tool for integrated patient management.

Analysis of community pharmacists work patterns

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Background: Understanding professional pharmacist time distribution in community pharmacy practice contributes to supporting transformation in scope of practice.

Purpose: To understand how community pharmacists spend their professional time within community pharmacy practice.

Method: An observational time and motion study was carried out in community pharmacy A, this was done over 40 hours. A second observational time and motion study was carried out in pharmacy B over 20 hours. Data was collected over periods of 90 minutes. When arriving at the pharmacy the observational study was not started right away in order to eliminate observer bias, in fact the collection of data began 10 minutes after arriving at the pharmacy and hence each data collection session lasted around 80 minutes. The strengths as well as weakness in the distribution of professional time in the community pharmacy were documented.

Results: The results of 40 hours of observation done in pharmacy A showed that medication dispensing is the activity which took up most of the pharmacists' time (33%). The activities which took up the least amount of time include medication review (1%), monitoring prescription for clinical appropriateness (2%), patient history review (3%) as well as rest, waiting and breaks. The results of 20 hours of observation done in pharmacy B showed that the activities which took up the most time included POYC: direct patient care (16%), non-prescription medication advice (15%) and responding to symptoms (15%). The activities which took up the least amount of time included waiting and breaks (1%). The way in which pharmacists spend their professional time varied between the two pharmacies and this is a result of various factors including layout of the pharmacy, the amount of help available for the pharmacist and differences in pharmacist's working methods.

Conclusion: When classifying the activities into direct patient services and indirect patient services, both pharmacists spent the majority of their time on direct patient services. This highlights how the pharmacist health profession is one which is very frequently in direct contact with the patient. The data indicates that pharmacists are spending a large amount of time on dispensing tasks leaving less time available for activities involving patient care and drug use management.

Imparting training to pharmacy students to carry out pharmacy audit in North India

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Background: In India, the pharmacists are deprived of sufficient training to run pharmacies following Good Pharmacy Practices (GPP). Many of the pharmacists are not aware about counselling visiting patients. Most pharmacies only dispense the medicines as per the prescription of the registered medical practitioner and provide directions to use. However, information about storage of medicines at homes is provided by only a few pharmacists.

Purpose: The existing students are trained to visit pharmacies in their localities with a questionnaire to find out whether Good Pharmacy Practices are being observed. The deficiencies found are explained to the working pharmacists to provide adequate pharmaceutical care to the visiting patients. Besides, they are also provided knowledge about demonstrating how to use medical devices such as humapen, asthma inhalers, and blood pressure instruments appropriately. The pharmacists were observed to find out any flaws in dispensing the exact medication in the appropriate dose as per the prescription and also explained about working the practice of substituting another brand of medicine without informing or taking consensual acceptance of the patient.

Method: Thirty students were trained and provided a questionnaire to conduct the pharmacy audit of 10 pharmacies each from the localities of north Indian states, viz., Haryana, Punjab, and Delhi. Before visiting pharmacies, consent to conduct the survey was sought from the owner for education and training purposes. The students quietly observed the working of pharmacists, their dealing with customers and patients, how medicines are stored in the pharmacies, counseling and providing directions to administer medicines.

Result: It was revealed from the study that 91.3% of pharmacies followed GPP and complied with the norms of the FDA. It was observed that 35 % pharmacy staff substituted the medicine brands prescribed by the physicians without the consent of the patients in Panipat, Delhi, Gurugram, Chandigarh and Panchkula. It was also evident that 60.9% pharmacies had a robust invoice management system, whereas, only 15% pharmacies had an earmarked space for Patient Counselling and Advising. Besides, 95% pharmacies followed cold storage conditions for storing ophthalmic medicines, antibiotics, vaccines and biologicals, by either installing a cold room facility or refrigerators.

Conclusion: The survey helped to estimate data related to pharmacies that do not follow Good Pharmacy Practices. This also briefs about the behavioral aspects associated with practice in the pharmacy profession. Thus, it can be concluded from the statistics that several modifications and a robust training of community pharmacists are required in the pharmacy profession to raise the standards for Good Pharmacy Practices for better patient outcomes.

Pharmaceutical compounding regulations: An international overview as comparison to Portugal

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Background: In the last years, some of the community pharmacies in Portugal have been undergoing a process of specialization in the field of Pharmaceutical Compounding, as others still preparing compounded medicines, with less or more frequency.

Increasingly, Pharmaceutical Compounding is the answer to specific and unique situations, for which the drug products available on the market cannot be used or in situations of stock-out of marketed drugs.

Purpose: This work aims to highlight the Pharmaceutical Compounding Regulations and Recommendations abroad, in comparison to Portuguese community pharmacies' circumstances and regulations.

Method: Assessment of the key recommendations and regulations applicable to Pharmaceutical Compounding, under the scope of:

- a) Portuguese Good Compounding Practices, published by INFARMED - National Authority of Medicines and Health Products, I.P.;
- b) Spanish Good Compounding Practices, published by AEMPS - Spanish Agency of Medicines and Medical Devices;
- c) French Good Compounding Practices, published by ASNM- National Agency for the Safety of Medicines and Health Products;
- d) United States Pharmacopeia (USP) General Chapters (<795> Pharmaceutical Compounding—Nonsterile Preparations, <800> Hazardous Drugs—Handling in Healthcare Settings and <1163> Quality Assurance in Pharmaceutical Compounding;
- e) PIC/s Guide to Good Practices for the Preparation of Medicinal Products in Healthcare Establishments.

Consideration of the main topics of the questions relating to pharmaceutical compounding regulations, addressed to CIMPI- Pharmaceutical Compounding Information Center at LEF.

Results: It has been identified a shared concern within several issues, among the different guidelines and recommendations. However, Portuguese guidance lacks some relevant issues, for instance, the consideration of the different compounding scenarios among Portuguese pharmacies (concerning, for example, the frequency of compounding and type of compounded medicines), the possibility of outsourcing between pharmacies, as well as safety and quality standards for handling hazardous drugs. These gaps create doubts for the pharmacies and contribute to lack of harmonization of the processes.

Conclusion: Nevertheless the differences and similarities between countries regulations, there is no doubt about the need to update and revise the General Pharmaceutical Compounding Regulations, namely the Portuguese Good Compounding Practices, published in Portuguese laws in 2004.

The guidance and recommendations applicable abroad, could be the basis for this revision. The relevance of standardization of the processes, relating to pharmaceutical compounding, should be the leading aim of this revision, although it would be fundamental to include customization of some requirements, based on the needs and expectations of Portuguese community pharmacies.

Community pharmacy engagement with the national consumer-controlled electronic health record, My Health Record

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Background: My Health Record (MHR) is a secure, consumer-controlled online service operated by the Australian Government that supports better patient and

consumer outcomes through better access to information providing healthcare providers access to information about consumers including medications. Australians were enrolled onto the MHR database under an opt-out system with approximately 90% of the Australian population having a personal record. Early implementation saw limited use by health professionals including pharmacists and strategies to enhance access and use were implemented.

Purpose: As part of the DCMedsRec study, funded by the Australian Digital Health Agency, one goal was to encourage and enhance the use of MHR by community pharmacists. For the first time, by using MHR, community pharmacists, had systematic access to a patient's hospital discharge summary to inform and improve ongoing patient care in the community. DCMedsRec made access to and use of hospital discharge summaries on MHR central to service provision.

Method: DCMedsRec was a non-blinded randomised controlled trial of an intervention by community pharmacists in Melbourne, Australia. Eligible patients were randomised to either a usual care group or an invitation to a structured medication reconciliation service by community pharmacists within 30 days post hospital discharge. Full protocol available¹.

Importantly, the trial was underpinned by electronic access to patients' the hospital discharge summaries via MHR. Most data used to measure factors related to the outcome was accessible electronically. Focus groups of pharmacists were conducted at the conclusion of the trial to evaluate their experience of use.

Results: Community pharmacists were overwhelmingly positive about access to significantly more patient information via MHR to provide enhanced patient care. The rates of access indicated a significant improvement on previous levels of use. 63% of services included review of a patient's MHR (some patients had declined an MHR), second only to the patient themselves as a source of information (89%) and well ahead of existing prescription records (38%). Some pharmacists experienced MHR access issues related to infrequent use of the service. Pharmacist feedback indicated that no patients raised any concerns about access to their data via MHR. There were some concerns about the quality and completeness of data on a patient's MHR but were still grateful for more information that usually accessible.

Conclusion: Access to discharge summaries via MHR enhanced community pharmacists' ability to manage complex patients. Data availability and quality were important and ways to enhance these were identified.

This research was funded by the Australian Digital Health Agency

Supporting use of health literacy strategies in pharmacy services by inclusion in electronic claim form

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Background: Poor or limited Health Literacy has repeatedly been identified as having negative effects on health outcomes in all settings. When considering medication use, poor health literacy impacts adherence, understanding and capacity to seek further information. Clear strategies for reducing the risk of poor health literacy have been identified, and generally rely on health professionals to proactively implement strategies to reduce risk for patients. These strategies include systematic use of “teach back”, prioritising information and creating safe contexts for questions to be asked. Unfortunately, the use of these strategies is sporadic and uncommon, influenced by factors such as pharmacist confidence, perceived time implications and environmental effects.

Purpose: The DCMedsRec trial evaluated the impact of a community pharmacy intervention on the risk of 30-day unplanned readmission and included systematic use of health literacy strategies to improve patient understanding and adherence.

Method: DCMedsRec was a non-blinded randomised controlled trial of an intervention by community pharmacists in Melbourne, Australia. Eligible patients were randomised to either a usual care group or an invitation to a structured medication reconciliation service by community pharmacists within 30 days post hospital discharge. Full protocol available¹.

Pharmacies were reimbursed for services on submission of an electronic data collection/claim form using REDCap[®] which was then used to link to other datasets. Importantly, specific health literacy strategies were embedded in the claim form to both act as a reminder to include them in service delivery and identify if and when this was done.

Results: The rate of inclusion of health literacy strategies in service delivery in this project was significantly higher than generally reported. Teach back activities were included in 75% of interventions, and 98% received comprehensive medication counselling.

Conclusion: Having a structured, systematic approach to medicine reconciliation after discharge in community pharmacy significantly improved the implementation of health literacy focused strategies which may enhance medication adherence and safety.

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Pharmacist's role in contraception throughout the world

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Background: Contraception is an important aspect of reproductive health and rights, and a key component of family planning. Despite the widespread availability of contraceptive methods, unintended pregnancies still occur globally, resulting in adverse health outcomes for women and children. Pharmacists play a crucial role in improving access to contraceptives. However, their involvement is highly influenced by the legal and regulatory frameworks in their countries. In many places, community pharmacists are the first and only point of contact for individuals seeking contraception. Therefore, it is critical to understand the role that pharmacists play in providing contraception and the barriers they face. The current knowledge gap on the legislation, regulations, policies, and guidelines governing the role of pharmacists in contraception across the globe necessitates this review.

Purpose: This review aims to examine the role of pharmacists in contraception throughout the world and to assess the legislative and regulatory frameworks that govern their role worldwide. It also examines the policies and guidelines that dictate pharmacists' practice and identifies the gaps and challenges associated with these frameworks.

Method: A comprehensive literature search was conducted on Embase, PubMed, Scopus, and Web of Science databases from January 2000 to April 2023, using key search terms. Data were extracted and synthesized using a narrative approach. A review of each country's legislation, regulations, policies, and guidelines was also performed, including the pharmacists' role in prescribing contraceptives and in providing emergency contraceptives.

Results: The review identified several ways in which pharmacists improve contraceptive care and access to family planning. These include educating patients and providers on hormonal contraceptives, collaborating with providers to fight misinformation, and advocating for increased access to

contraceptives. Pharmacists are usually involved in counselling and dispensing contraceptives. However, only a few countries, or states/regions within countries, allow pharmacists to prescribe them. Similar findings were obtained for the pharmacists' role in providing emergency contraceptives.

Conclusion: This review highlights the need for a coordinated approach to develop and implement legal and regulatory frameworks that support pharmacists' role in contraception provision in each country, across the globe. The real-life family planning training and practice can differ from the respective guidelines, regulations, and policies. Policymakers should prioritize increasing access to contraception through pharmacists and address the barriers associated with the frameworks. Future research should focus on identifying best practices for overcoming these challenges and improving contraceptive care worldwide.

Physicochemical and microbiological stability of melatonin 5 mg/mL oral compounded suspension

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Background: Melatonin is a pineal hormone commonly prescribed to children (2 mg/mL or 5 mg/mL) to treat insomnia (sleep onset and delayed sleep phase syndrome), although it is not licensed for these indications. In most countries, including Australia, there is no melatonin oral liquid commercially available. Therefore, there is a clinical need for an extemporaneous preparation of melatonin adapted to children.

Purpose: To develop and test a melatonin oral compounded suspension with an extended beyond-use-date (BUD) for use particularly in pediatric patients.

Method: A batch of 1,000 mL (Lot #: 111220-RT) was prepared for melatonin 5 mg/mL oral compounded suspension by adding the active ingredient to SuspendIt, a proprietary oral vehicle, as well as the following excipients: Steviol Glycosides 95% 0.2 g, Citric Acid USP Monohydrate (powder) 0.935 g, Sodium Citrate USP Anhydrous 1.432 g and flavor (marshmallow, artificial) 0.5 mL. The oral compounded suspension was evenly distributed into six prescription oval amber plastic bottles and stored for 180 days in an environmentally controlled chamber at a temperature of 25°C ± 2°C and relative humidity of 60% ± 5%. At pre-determined time points [0, 14, 30, 60, 90 and 180 days], a study sample (one unopened bottle) was withdrawn from the storage condition, shaken vigorously and tested for physicochemical and microbiological stability. The physical characterization consisted of observing all samples for appearance/color and testing for pH (Horiba LaquaTwin pH meter). The chemical characterization consisted of assay testing employing a stability-indicating High Performance Liquid Chromatography (HPLC) method (Waters Acquity)

developed and validated by Eagle Analytical Laboratories (Texas, US). The microbiological stability followed the United States Pharmacopoeia (USP) Chapter <51> Anti-Microbial Effectiveness (AME) testing method.

Results: Considering the physical characterization, the melatonin oral compounded suspension exhibited a homogeneous white to light beige colour and a smooth appearance. The range of pH (4.58-4.72) was within the acceptable limits. Considering the chemical characterization, the chromatographic assay method was validated by evaluating the system specificity, linearity and range, accuracy/recovery, precision (repeatability and intermediate), solution stability, robustness, and suitability. Subsequently, the percent potency was calculated taking into account the baseline measurements on day 0. The potency of the melatonin suspension remained within ±10% of the specifications throughout the study, as follows: 98%-107%. The preservative system in SuspendIt successfully protected the oral compounded suspensions from microbial contamination since there was no growth of challenge microorganisms throughout the study for all samples.

Conclusion: Oral compounded suspensions are rapidly prepared, allow dosing flexibility and are easy to administer. However, community pharmacists need validated stability studies to prepare oral liquids with quality and safety. A palatable, sugar-free formula was developed for melatonin 5 mg/mL in SuspendIt to facilitate the extemporaneous preparation in the community setting. The corresponding BUD was determined using a valid, stability-indicating analytical method and it was concluded that the melatonin 5 mg/mL oral compounded suspension is physically, chemically and microbiologically stable in SuspendIt at room temperature for up to 180 days.

Evaluation of telemedicine pharmaceutical care for hypertension established patients during COVID-19 pandemic- A pilot study

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Purpose: To evaluate the telemedicine pharmaceutical care service in patients with existing hypertension to mitigate exposure to COVID-19 infection.

Methods: Participants were allocated to telemedicine pharmaceutical care (conducted based on medication guidance including educational materials and individualized pharmacotherapy via digital intervention, 173 participants) or usual care (routine outpatient hypertension care and appointments, 179 participants). The primary outcome was blood pressure (BP) reduction from baseline to the 6-month follow-up visit, the proportion of the target BP achievement, overall adherence to prescribed medication as well as a composite of non-fatal stroke, non-fatal myocardial infarction and cardiovascular death. **RESULTS:** At 6 months, BP was controlled in 89.6% (n=155) of intervention patients and 78.8% (n=141) of usual care patients (OR=1.137, 95%

CI=1.038-1.246, P=0.006), giving a mean difference of -6.0 mmHg (-13.0 to -2.5 mmHg) and -2.0mmHg (-4.0 to -0.1 mmHg) in SBP and DBP, respectively. 17.9% (n=31) of the patients in the intervention group were non-adherent with medications, compared with 29.1% (n=52) in the usual care group (P=0.014). The composite clinical endpoints were reached by 2.9% in the intervention group and 4.5% in the control group with no significant differences (OR=1.566, 95% CI=0.528-4.646). **CONCLUSIONS:** Telemedicine pharmaceutical care for hypertension management had led to better blood pressure control and medication adherence improvement than UC during COVID-19 epidemic, resulting in an reduction of overall adverse cardiovascular events occurrence.

Glycemia on Target: impact of an educational intervention on glycaemic control in people with diabetes using a specific glucometer

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Background: The estimated prevalence of diabetes in the Portuguese population aged between 20 and 79 years is 14.1%, and only 56% have a diagnosis. Self-monitoring blood glucose (SMBG) is an essential practice and an important component for the control of diabetes when carried out properly, and education programs for people with the disease are important to enable them to perform, interpret the results, and adjust the appropriate therapeutic regimens to achieve glycaemic control.

Purpose: To evaluate the impact of an educational intervention (EI) program, to support people living with diabetes, focused on SMBG, on fasting blood glucose (FBG) values and the contribution to diabetes management, perceived by the persons involved.

Method: The database, analysed in Excel and Salesforce, was obtained as part of an intervention designed to support people with diabetes who use a certain glucometer for SMBG. This intervention includes an initial EI (t0) and 1 follow-up contact after 14 days (t1). If the person agreed to install a mobile application to support SMBG, two additional contacts were made after 2 weeks (t2) and 5 weeks (t3). The follow-ups were carried out by the pharmacists after proper training. The information was collected on the Salesforce HealthCloud platform through customized forms. Follow-ups completed between May 2022 and February 2023 were included in the analysis.

Results: Until March 2023, 352 people were enrolled in the program in 65 pharmacies, and by the end of February, 240 users completed the follow-up in t1, and 143 continued the follow-up until t3. Most participants who underwent the initial evaluation (n=252) had a diagnosis of type 2 diabetes (90.1%) and were going to start using that specific glucometer (52.4%). The 3 most prevalent pharmaceutical interventions were: health education (n=203), a review of

the procedure for performing the glycaemic test (n=171), and a review of the functionalities of the meter (n=146). At t1, the mean FGV reported (n=226) was 124.2 mg/dL (a decrease of 7.2% compared to t0) and the mean FGV of the last 30 days was 131.0 mg/dl (a decrease of 6.4% compared to t0). At t3, the mean FGV reported (n=141) was 119.8 mg/dL (a decrease of 10.5% compared to t0), the mean FGV of the last 30 days was 127.4 mg/dl (a decrease of 8.9% compared to t0) and the mean FGV of the last 90 days was 120.9 mg/dl (a decrease of 9.6% compared to t0). On a scale of 1 to 10, where 1 means "Terrible" and 10 "Excellent", 86.0% (n=123) evaluated their experience with the Program between 8 and 10, an average value of 8.6, and on a scale of 1 to 10, where 1 means "No Impact" and 10 means "Significant Impact", 83.9% (n=120) evaluated the contribution of this program between 8 and 10, with an average of 8.7.

Conclusion: Personalized support in the use of a particular glucometer, and EI focused on SMBG appears to have a positive impact on glycaemic control and the contribution to the management of the disease perceived by the people involved.

Programme-A renewed training proposal for pharmacy teams

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FIT[®]2.0 Programme was launched on March 21, 2022, aims to innovating and transforming the learning of community pharmacy teams. It is presented as a flexible learning model, adapted to the individual pace, in order to sustain focus on professional qualification, as the current challenge for pharmacy and health sector.

Including a set of face-to-face training and online formats, it emerges as a complete training solution tailored to each pharmacy. In one hand it respects professional differentiation, providing specific content for pharmacists and technicians, on the other hand it allows the professionals to build their own Training Path. The Training Path aims to respond to the acquisition and development of pharmacy teams knowledge and skills, according to the needs in the performance of their duties. By including more than 150 hours of training, it also values the legal compliance of the 40 hours of training, individually attesting the professional with an annual FIT[®] Certificate. This enrichment of learning, coupled with the comprehensive empowerment of the entire pharmacy team, aims to attract, develop and retain human resources in pharmacies.

In the first year, FIT[®]2.0 programme contributed to the professional development in 502 pharmacies. About 3.400 professionals from pharmacy teams participated in the Programme's trainings, representing a total of 9.950 training

hours that resulted in 2.447 professional certificates from pharmacists, pharmacy technicians and pharmacy assistants.

During the first year of FIT2.0, satisfaction level was measured regarding the training model and contents available. Considering the 1108 responses obtained by evaluation assessment, 74.37% of professionals are very satisfied and 21.75% are satisfied, resulting in a 98.29% recommendation rate for the training programme. In addition, on January 2023, the evaluation of the effectiveness of the programme was integrated, which reinforced the alignment of training activities with the needs and expectations of pharmacies. Considering the 48 responses obtained, the results indicate that 97% of respondents consider the acquired knowledge as useful in the pharmacy activity, and 79% consider the FIT 2.0 programme brought a positive impact on the performance of the employees, rating it overall at 8, on a scale of 1 to 10. Being able to "do" is much more than just knowing "how to do". The FIT® 2.0 objective is to enhance these two concepts, allowing the professional qualification to be closer to the challenges of the pharmacy and healthcare sector.

Validation of educational materials on inhalation devices: preliminary results

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Background: The International Pharmaceutical Federation (FIP) has emphasized the need for pharmacists to support patients with chronic respiratory diseases. Despite this encouragement, in Brazil, there are few validated educational materials for patients under these conditions.

Purpose: To validate brochures on inhalation devices for the Brazilian population.

Methods: The validation process started with 8 brochures developed by the Federal Council of Pharmacy of Brazil: Homemade spacer for pressurized metered-dose inhaler; How to use the pressurized metered-dose inhaler; How to use the pressurized metered-dose inhaler with spacer; How to use the capsule based dry powder inhaler; How to use the Turbuhaler®; How to use the Diskus®; How to use the Ellipta®; How to use the Respimat®. The brochures were

evaluated through the Delphi technique by 18 experts (15 pharmacists, 03 physicians, and 01 linguist). The experts used the Instrument for the Evaluation of Printed Educational Materials with focus on Health Literacy in Brazil. Based on expert considerations, a new prototype was developed and submitted for evaluation by the target population through focus groups.

Results: Based on the initial evaluation conducted by the experts, syntactic and semantic changes were made to the written materials using Plain Language strategies, with simpler words, shorter and more direct sentences and a layout that made it easier for patients and pharmacists to view and access the information available. So far, three brochures have been validated during the patient focus groups and the contributions led to other adjustments in terms of language simplification and content layout.

Conclusion: It is expected that the validation process of educational materials will result in new versions of brochures with simpler language and structure that are easier to understand by patients, as well as serving as support for the medication use process.

Vaccination services by a pharmacist in Brazil: implementation program and preliminary results

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Background: The pharmacist's role in vaccination has been as an educator and immunizer. After the regulation in 2017 that allowed the provision of vaccination by the pharmacist, it became necessary for these professionals to acquire skills regarding this opportunity and challenge.

Purpose: To promote the training of pharmacists for the provision of the vaccination service.

Methods: The Federal Pharmacy Council of Brazil called on experts to develop and implement the pedagogical project. The course was organized in a distance learning modality (40 hours) and another face-to-face modality (20 hours) that approached from the fundamentals of immunology to service management. In the first modality, the pharmacist learned the content through video classes, complementary and support material. Subsequently, the participant was evaluated by the elaboration of mental maps and an objective test. Those who scored 60% were approved. In the face-to-face module, the pharmacist performed assessed

practices (active methodologies): vaccination card analysis, elaboration of the care plan, discussion of clinical cases, vaccine preparation and administration.

Results: Five documents were published: pedagogical project, facilitator and participant manuals, documentation of the care process and the book "Administration of vaccines and other injectable drugs by pharmacists" (partnership with the Order of Pharmacists of Portugal). From 2021 to date, the Course has trained 20 facilitators, had 24,259 registered participants, 4,136 pharmacists approved in the distance learning modality, 141 face-to-face modules held in the 27 capitals and 19 cities in the interior of Brazil, and 2,998 pharmacists qualified as immunizers.

Conclusion: The course enabled pharmacists to provide the service of effective and safe vaccination, contributing to the reduction of misinformation and vaccine hesitation, fighting fake news and increasing vaccination coverage in Brazil.

Feasibility of implementing point-of-care testing program in community pharmacy for antimicrobial stewardship in respiratory tract infections: Results of a scoping review

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Background: Diagnostic uncertainty regarding the cause of respiratory tract infections (RTIs) multiplies the problem of unnecessary use of antibiotics and antimicrobial resistance in primary care. Point-of-care testing (POCT) programs have been recognised as a potential stewardship strategy to support diagnostic certainty, patient referral, and optimisation of antimicrobial use in GP and pharmacy practices. To date the breadth of study and evidence supporting implementation feasibility of POCT services by community pharmacists remain scant.

Purpose: To investigate the feasibility, and implementation challenges of POCT programs in community pharmacy to improve safe antimicrobial use in RTIs using a scoping review.

Methods: Medline, Emcare, PubMed, International Pharmaceutical Abstracts, Health Technology Assessment, Cochrane Central Register of Controlled Trials and Google

Scholar databases were searched for articles to Dec 2022. Three reviewers independently screened, reviewed and selected the studies where community pharmacists provided POCT screening and treatment services to patients with RTIs for improving antimicrobial stewardship. The primary outcome was clinical, operational, and economic feasibility and secondary outcomes included cost-effectiveness and implementation challenges. Descriptive statistics was used to analyse the outcomes. Published study protocol detailed the review methods.

Results: Database search resulted 1854 studies for title and abstract screening and 94 studies for full text reviews. Eventually, 20 studies from UK, Australia, Canada, USA, France, Nigeria and Syria were eligible for inclusion; 17 studies involved Rapid antigen detection test (RADT) services and three studies involved POCT CRP test services by community pharmacists. In total, 26822 patient consultations occurred by trained community pharmacists; 78% of patients received POCT services and 12% of patients were directly referred to GPs immediate after screening. On average, less than a quarter (24%, range 17% to 28%) of patients were RADT positive and only 16% of them received antimicrobial prescription from a collaborative prescriber. CRP were indicative of having antimicrobial prescriptions for around 14% (range 8%-16%) of patients tested. Over 95% (range 92%-98%) of patients received self-care advice from pharmacists. Most of the pharmacists reported that the test was simple, reliable and assisted their clinical decision making. Test accessibility, efficient service delivery, remuneration and credibility of pharmacists were major factors to influence the provision of the services for antimicrobial stewardship and consumer uptake. Time constraints and heavy documentation were deemed as common barriers. None of the study assessed cost-effectiveness of the services.

Conclusions: POCT program is feasible to implement in community pharmacy and has the potential to reduce antimicrobial use in RTI patients. Number of randomised controlled trials and economic studies are extremely limited that needs future research to determine the effectiveness and cost-effectiveness of the POCT services. Access to POCT training and kits and policy supporting GP-pharmacy collaborative practice agreement could determine the implementation success of the POCT program in community pharmacy

The evolution of the dispensing service to PAMI affiliates at community pharmacies in Argentina during the first four years of agreement with that institution.

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Background: The argentinian health care system is characterized by its fragmentation and its coverage,

regulation and territorial inequalities. Thereby, three sub-systems coexist: the social insurance, the private insurance and the public sector.

Within social insurance, we find the national and provincial social insurances and PAMI, an institute intended to provide health care to retirees and pensioners and their families.

PAMI has more than 5 millions affiliates (12% of the national population) who need medicines for their chronic and acute states of health.

The access to those medicines is crucial for preventing, diagnosing and treating diseases and is at this point where the labor of the community pharmacies become indispensable by means of a network of more than 16.000 community pharmacies around the country, taking care of all the population, specially of elderly people throughout an agreement between COFA, other pharmacy institutions and PAMI that guarantee the access to their medicines what become fundamental to the health system as a whole.

Objective: To describe the evolution of the dispensing service at community pharmacies to PAMI affiliates in the last four years.

Methods: An observational, retrospective and descriptive study was carried out to evaluate the evolution of the units dispensed per month, the participation of COFA in the PAMI agreement and the variation of the medicines pricing in an inflationary background like the argentinian one, between november 2018 and october 2022.

Results: During the observed period, 707.590.413 units were dispensed (14.741.466,95 per month) of which red-COFA had a participation of 367.947.015 units (52%). The total investment in medicines was AR\$641.082.702.372,98, registering a price hike of 389% in the prescription between November 2018 (AR\$871,55) and October 2022 (AR\$ 3.338,00).

Conclusion: The active political role of the community pharmacies throughout agreements with institutions like PAMI helps to guarantee the access of the population to their medicines. The investment in medications becomes extremely complex in an inflationary background like the one currently is happening in Argentina (104,3% according INDEC statistics between march 2022 and march 2023). The pharmacy institutions have the obligation to stay up to date, facing this situation, discussing and keep working together with national organizations aiming to find alternatives that guarantee the access to the medicines as a social good.

The importance of the community pharmacies in Argentina in the early detection of cardiovascular diseases throughout the remunerated pharmaceutical service of blood pressure control and monitoring.

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Background: Historically, the Argentine community pharmacy has been considered a key piece within the health system due to its assistance, coverage and access, due to the large number of pharmaceutical services that are provided to patients there, and one of them is the control and monitoring of blood pressure. Since 2017, the Argentine Pharmaceutical Confederation (COFA) began a joint effort with the Argentine Hypertension Society (SAHA), making this service collaborative and interprofessional, a huge step for the formalization and protocolization of this service. Thus, a campaign was launched to assess the cardiovascular risk of outpatients in community pharmacies. Three years of work, registration and follow-up, with more than 100,000 records, served as part of the framework so that in 2021 the national Ministry of Health issued the Resolution 2949/2021 giving official recognition to the Pharmaceutical Services Based on Primary Health Care. After this, progress could be made in 2022 towards the recognition and remuneration of the service, which is of vital importance for its sustainability.

Objective: To evaluate the participation of community pharmacies in the different provinces of the country and determine its importance in the early detection of cardiovascular diseases.

Methods: Through the SIAFAR computer system, data was recorded on outpatients who visited a community pharmacy in the COFA network in March 2023. Was evaluated the geographical distribution of participating pharmacies, the number of patients who used the service, its distribution according to sex, its body mass index and its cardiovascular risk. To define cardiovascular risk was considered the blood pressure values greater than 140mmHg / 90mmHg and patients classified as obese.

Results: During the study period, 2265 controls were registered throughout the country, More record collected by Buenos Aires (1019 records), Córdoba (243 records) and Entre Ríos (200 records). There were 1708 patients who accessed the service (1116 women and 592 men). The average body mass index of the patients was 27.84 (min. 15.62; max. 65.07). The classification of the patients according to their BMI was: low weight (9); normal weight (527); overweight (681); obesity 1 (354); obesity 2 (115); obesity 3 (20); obesity 4 (2). Between the monitored patients, despite receiving antihypertensive drug treatment, 311 presented high blood pressure values and 116 of them also suffered from some degree of obesity, being this the group with the highest cardiovascular risk.

Conclusion: The pharmaceutical services provided in community pharmacies are the present and the future of the profession, with the pharmacist becoming crucial for the health system in the screening and early detection of non-communicable diseases such as arterial hypertension. This allows a prompt referral to medical consultation and counseling to start non-pharmacological treatments.

A recognized and paid pharmaceutical service is not achieved from one day to the next and requires hard work of pharmaceutical institutions, forming part of interdisciplinary discussion tables with other bodies and associations, jointly projecting and printing a new culture of profitable recognition for the pharmaceutical services that day by day are offered in every corner of the country.

Developing strategies to improve rational use of antibiotics

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Background: Resistant bacterial infections due to misuse and overuse of antibiotics can potentially be a leading cause of death unless controlled, with cost of management increasing due to longer hospital stays and additional laboratory investigations. Public awareness campaigns on antibiotic resistance and communication through community pharmacists, being the most accessible healthcare professionals, may improve knowledge within the population on the rational use of antibiotics.

Purpose: To evaluate the perceptions of the general public on the use of antibiotics and to put forward recommendations for rational antibiotic use.

Method: A questionnaire targeting the Maltese general public on the knowledge and use of antibiotics and knowledge on antibiotic resistance was developed, consisting of multiple choice questions, true and false questions and Likert-type statements. The questionnaire was validated, ethics approval was granted and a pilot test was undertaken. The questionnaire was disseminated online through social media and the data collected was coded and analysed using SPSS® Version 27.

Results: Two hundred people participated in the questionnaire of which 70% (n=140) were aware of antibiotic resistance and its consequences. Antibiotics without a prescription were requested by 9% (n=17) of participants and advice on the proper use of antibiotics was given to 84% (n=169) of patients by a healthcare profession. Thirty percent (n=60) of participants disagreed and strongly disagreed that resistance may arise from an unfinished prescribed course of antibiotics whilst 21% (n=42) were uncertain. Fifty-seven percent (n=115) of participants agreed that resistant bacteria can spread from person to person whilst 16% (n=32) did not. When questioned whether one is at risk of acquiring an antibiotic-resistant infection even if

antibiotics are taken correctly, 37% (n=75) agreed that they are still at risk whilst 34% (n=69) did not. Participants (61%, n=123) felt that they had not received information regarding the correct use of antibiotics and antibiotic resistance in the past 12 months. The remaining 39% (n=77) stated they obtained information from doctors (70%, n=139) and pharmacists (50%, n=100).

Conclusion: Results obtained from the questionnaire indicate further awareness should be raised against resistance. Education on antibiotic use through antibiotic awareness campaigns should be ongoing and target the community and healthcare professionals individually, to ensure appropriate prescribing, dispensing and administering of antibiotics. Multidisciplinary teams set up to include a doctor and pharmacist can be further strengthened by introducing electronic prescribing, allowing for more precise prescribing of antibiotics through re-evaluation of disease as well as referral to the guidelines published in the antimicrobial stewardship programmes.

Inappropriate prescribing in community pharmacy practice

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Background: Inappropriate prescribing involves the prescribing of drugs where this is no straightforward indication and where the risks outweigh the benefits. Risks from inappropriate use of medicines cause patient harm and adverse drug events. Identifying and studying the risks which come about from medication errors and from prescribing inappropriately are an important first step to preventing errors from occurring

Purpose: To evaluate the different types of medication errors and to assess the frequency and the nature of medication errors.

Method: An observational study and pharmacist interviews were conducted in seven community pharmacies around Malta selected by convenience sampling. The pharmacies were visited during the same time period to allow for better comparison of results. A Medication Error (MedErr) documentation sheet was developed and validated by five people; three pharmacists, one general practitioner and one lay person. Pharmacist interview questions were developed and validated by the same group of individuals who validated the MedErr documentation sheet. Private prescriptions presented to the pharmacist during the observational study carried out over 25 hours per week for approximately 18 months, were analysed and categorised according to the MedErr sheet to facilitate their quantification. One-hour interviews with twenty community pharmacists recruited from the same pharmacies which the observation study was conducted, were undertaken to assess the different types of

prescription errors that pharmacists encounter during their practice.

Results: From 140 prescriptions implemented within the MedErr documentation sheet, 282 medication errors were found. Error in dose, wrong quantity and frequency of medications and error in naming of drug were the most common prescription errors found, with 101, 79 and 61 errors respectively. Error in dose was further subdivided into different categories in the MedErr, of which 'strength or dose of preparation not stated', 'wrong unit in dose' and over dosing were the most common with 20, 17 and 15 errors found respectively.

From the 20 pharmacist interviews, pharmacists (n=17) confirmed that they have encountered prescription errors and the prescriber is contacted for clarification. Lack of communication between healthcare professionals was named by pharmacists (n=18) as one of the main reasons behind prescription errors. Pharmacists (n=19) believed that improved pharmacist accessibility to patient records and to the prescribing process will result in less prescription errors. Suggestions to reduce inappropriate prescribing included access to online patient records (n=6), e-prescribing (n=6) and improved communication between healthcare professionals (n=5).

Conclusion: Pharmacists play a role in identifying prescription errors and are aware that lack of communication between healthcare professionals increases inappropriate prescribing.

Evaluating prescriptions allows for the identification of existing or potential problems, and enable interventions to be implemented, promoting the appropriateness of prescriptions and clinical drug usage.

Risk-based approach to inappropriate prescribing

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Background: The use of medications is an integral part of healthcare and if used inappropriately may lead to situations where the risks outweigh the benefits. Appropriate prescribing may be assessed through patient outcomes and assessing treatment benefits versus risks. Medical errors result in consequences where patients suffer increased morbidity and mortality. Assessing the risk associated with inappropriate prescribing is important to help assure patients of appropriate treatment.

Purpose: To evaluate and quantify the risks of medication errors risk matrices.

Method: A Medication Error (MedErr) documentation sheet was developed and validated by five people. Private prescriptions presented to the pharmacist during observational studies carried out were analysed and implemented within the MedErr sheet, and categorised to

facilitate their quantification. Ten cases, based on the level of the researcher's perceived risk, were presented to six pharmacists and six general practitioners. A 5x5 risk matrix, comprising of the severity of consequences and probability of the risk occurring was filled in by the focus group and a risk priority number (RPN), which is the product of severity and probability, was obtained.

Results: Twelve members participated in the focus group. From the 10 medication errors presented to the focus group, 5 of the errors were considered to be of high risk by 5 or more of the participating members. The risk matrix represents severity and probability which are rated on a 5-point Likert scale, with a RPN of 1-5 denoting a low-risk score, 6-15 a medium-risk score and 16-25 a high-risk score. One of the examples presented was an error in dose and naming of drug which read: flupentixol 0.5mg stat for seven days where the prescription should have read fluconazole 150mg stat. This was deemed as a high-risk error by six of the healthcare professionals. Another example presented was a drug-drug interaction which read: ranolazine 500mg and clarithromycin modified release once daily for 7 days, which are contraindicated when used simultaneously. This error was deemed as high-risk by 5 of the healthcare professionals who participated in the focus group.

Conclusion: Pharmacists can help through their knowledge of medicines to identify medication errors and associated risks, and can contribute within a multidisciplinary team to provide mitigation strategies to improve patient safety.

Knowledge, attitude and practice of pharmacy personnel in community pharmacy regarding herbal medicines

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Background: Use of herbal medicines has increased noticeably in Nepal and they are available over the counter in most community pharmacies in various dosage forms. Widespread use of herbal medicines is due to the belief in public that they are safer and more effective in addition of being inexpensive when compared to the allopathic medicines. Unregulated use of such preparations arise safety concerns in the consumers and this necessitates an appropriate standardization and monitoring mechanisms to control the quality and practice.

Purpose: The purpose of this study was to assess the knowledge, attitude and dispensing practice of community pharmacy personnel at Lalitpur district, Nepal regarding herbal medicines.

Method: This study was conducted among 228 community pharmacies of Lalitpur district, Nepal. Pharmacy personnel completed a multicomponent questionnaire with sections on socio-demographic characteristics, practice and attitude

pertaining to the use of herbal medicines and knowledge about them.

Results: Majority (85.5%) of the study participants reported that they often dispense herbal medicines in their pharmacy. Majority (93%) of them have used herbal medicines for self-treatment. Males were reported to be more frequent consumers of herbal medicines. Cough and cold preparations were found to be the most commonly dispensed category of herbal medicine, followed by laxatives, general health tonics, medicines for abdominal discomfort, pain relievers, medicines for kidney stones and liver tonics.

Majority of the pharmacy personnel were found to be practicing herbal medicine well. Almost all of the participants (99.1%) were found to have positive attitude towards herbal medicines. Age and duration of work experience in the pharmacy were found to be affecting the attitude significantly ($P < 0.001$). Despite of exhibiting good practice and having positive attitude, majority of the pharmacy personnel were found to be having poor knowledge about herbal medicines they dispense and this was found to be associated significantly with the level of education and trainings ($P < 0.001$).

The percentage of participants who always counseled patients while dispensing herbal medicines was found to be only 9.7%. Some of them (14.4%) reported that they never inquired the patient on the concomitant use of other medications including allopathic medicines while dispensing herbal preparations. Few of the participants (2.1%) reported regular dispensing of both allopathic & herbal medicines together to the same person. More than half of the participants (60.5%) revealed that they have dispensed herbal medicines even to the pregnant and breastfeeding women.

Conclusion: Herbal medications are being dispensed regularly from allopathic community pharmacies in Nepal and lack of knowledge of dispensing pharmacy personnel might put the patient at risk of harm. Regular training programs to improve their knowledge level, developing mechanisms for patient monitoring and vigilance from the regulating body might help in ensuring safe use of herbal medicines.

Exploring pharmacy staff experiences with interpreters and their impact on communication in Australian community pharmacies

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Background: Australia is a multicultural society with 27.6% of the population born overseas, and half of Australians have a parent born overseas. In 2021, a total of 872 000 people, mostly consisting of people born overseas, indicated

they did not speak English well, or they did not speak English at all. To help overcome this issue, community pharmacists have access to a free phone interpreting service (TIS National) to enable pharmacists to deliver pharmacy services and provide health care to people with limited spoken English proficiency, however uptake of this important service is poor. Language discordance can reduce medication adherence, affect patient safety, lead to diagnostic errors and also reduced levels of patient satisfaction. Existing literature has identified barriers and facilitators to providing pharmaceutical care to people with limited English proficiency, however no study has focused on the use of TIS National.

Purpose: This study aimed to explore the knowledge, experiences and attitudes of pharmacy staff in accessing and using interpreters in community pharmacy. It also explored practice related factors which can affect the delivery of interpreting services within this setting.

Method: Semi-structured interviews were conducted with a range of various community pharmacy staff including pharmacists, pharmacy managers and pharmacy assistants working in Queensland, Australia. Interviews were audio recorded and transcribed verbatim. Themes were determined from the data primarily using content analysis via Leximancer software.

Results: Participants' responses centred on the following themes: lack of awareness of interpreting services, uncertainty using interpreting services and the need for strategies to raise awareness for pharmacy staff and patients. Barriers to the use of interpreter services included: time, lack of training, lack of formal pharmacy procedures to service people with limited English proficiency, preference to use alternate methods to address language barriers, and patients who were unable to use verbal interpreting. Although knowledge of the TIS National interpreting service specifically was low, participants recognized the value of using verbal translation services when there was language discordance. Finally, not all pharmacies currently have appropriate facilities to delivery phone interpreting services.

Conclusion: The findings identified barriers to the use of TIS National interpreting services and highlighted the use of alternative strategies to bridge language barriers. Enhanced promotion of the TIS National interpreting service and additional training have been identified as facilitators to using TIS National. Further research is warranted to expand upon these initial findings to better service the health care needs of patients with limited English proficiency when accessing pharmacy services in Australian community pharmacies.

Evaluation of the impact of the intervention of the pharmacist in the motivation for the treatment of Obesity through the program "Give Weight to your Health".

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Background: Obesity is multifactorial and should not be seen as a choice. The treatment of Obesity requires the intervention of a multidisciplinary team, of which pharmacists are also part.

Purpose: Anthropometric evaluation of patients; Evaluation of the motivation of patients for the treatment of Obesity; Evaluation of the impact of pharmaceutical intervention in the motivation of the patient for pharmacological and non-pharmacological treatment of Obesity.

Methods: The present study took place during May 2022 and involved two interventions:

- Training of pharmacy professionals in terms of approach and interventional role in Obesity;
- Promote health literacy among overweight or obese patients, acting to raise awareness of earlier diagnosis (dissemination of communication materials in pharmacies and the media);
- Anthropometric evaluation and questionnaire implementation:
 - Check of weight, height, waist circumference and BMI;
 - Implementation of questionnaire to gather the following information:
 - ☐ Ongoing behavioural changes; comorbidities associated with overweight; ongoing strategies and/or treatments for weight loss; assessment of the patient's motivation for Obesity treatment.

Data were collected using a Microsoft® form developed for this purpose and analysed using the Excel® software.

Results: Of the pharmacies involved, 93 involved 5102 people in this intervention action of which 74% (n= 3776) were female. The age group with the highest prevalence was over 60 years (38%). Of the assessed individuals, 55% were overweight (BMI \geq 24.99 kg/m²), 52% had a waist circumference higher than recommended (94cm for men and 80cm for women) and 53% had at least one or more associated comorbidities. Of the overweight patients, 64% were not being monitored during the weight loss process, and of these, 44% represented obese grade I (30%), grade II (10%) and grade III (4%) patients. Regarding the impact of pharmaceutical intervention (classified between 1 to 5), there was an increase in the approach and initial motivation of the patient for the treatment of obesity (grade 1- 9%; grade 2 - 14%; grade 3 - 47%; grade 4 - 20% and grade 5 - 11%) compared to the final motivation of the same (grade 1- 4%; grade 2 - 7%; grade 3 - 18%; grade 4 - 46% and grade 5 - 22%).

Conclusion: Portugal was a pioneer in recognising obesity as a chronic disease and a priority public health problem in

2004. It is crucial to raise awareness of the need to fight obesity, now considered the 'pandemic' of the 21st century. As health professionals, we must fight to change people's actions, encouraging them to adopt a healthy lifestyle through a balanced diet and physical exercise.

Community pharmacies are ideally placed to identify and monitor people who are overweight and/or obese.

In this context, and with regard to the Obesity intervention action, we were able to prove, through the results obtained, the beneficial and determining impact that pharmaceutical intervention represents in the patient's motivation for obesity treatment.

Evaluation of the impact of the pharmacist intervention in the early detection in Chronic Obstructive Pulmonary Disease (COPD)

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Background: Chronic Obstructive Pulmonary Disease (COPD) is currently considered the third leading cause of death in the world. Spirometry is a basic pillar of the study of respiratory function, which allows to obtain spirometric parameters (FVC, FEV₁, FEV₁/FVC and PEF), presenting promising objectives in the detection, evaluation and monitoring of pulmonary pathologies.

Purpose: Evaluation of Pulmonary Function; Brief intervention for smoking cessation; Identification of patients with respiratory pathology, without diagnosis.

Methods: The study took place during November 2021 and involved three interventions:

- Promoting health literacy among patients with COPD, acting to raise awareness of earlier diagnosis (dissemination of communication materials in the media);
- Brief Intervention for Smoking Cessation for smoking patients;
- Pulmonary function was assessed in patients with the following symptoms (dyspnea, cough, exhalation, fatigue, age > 45 years, and smoker) through spirometry. Spirometries were performed using an Air Smart Spirometer®, following the necessary requirements and subsequent medical referral.

Data was collected using a form developed for this purpose, and analysed using Excel® software.

Results: Of the pharmacies involved, 100 involved 1750 people, of which 61% (n=1068) were male, 76% were aged between 60 and 76 years and 46% were smokers (higher rate in males). Of the individuals who were referred to the doctor, 22.5% had a Tiffeneau Index < 70%, of whom 75% were asymptomatic, a frequent feature of mild COPD. In terms of spirometry classification, in both genders, data from 1417 spirometries were obtained. In 595 (42%) of these patients, major changes in the ventilatory pattern were detected, with the following distribution: 16% were classified as obstructive, 12% as mixed and 14% as

restrictive. The users who presented obstructive and mixed curves were referred to the doctor. Of the patients evaluated, 73% had not been diagnosed with respiratory pathology. The average number of cigarettes smoked per day was 15.6 and the average duration of smoking was 28 years for men and 18 years for women. The vast majority (67%) had already made at least one smoking cessation attempt, but only 6% with follow-up. All patients were referred to the smoking cessation programme through the 5As Brief Intervention.

Conclusion: Spirometry assessment allowed early detection of respiratory function changes. In COPD, the role of the community pharmacist in educating patients about their disease is crucial. The early identification of signs of a mild stage, which is usually asymptomatic, may lead to early treatment of the patient, with significant improvement in his quality of life.

Pharmacist-led intervention on smoking cessation management: A systematic review and meta-analysis

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Introduction: Smoking poses a severe threat to world health, but with professional support, stopping success can be increased. Smoke cessation services can be conveniently provided by pharmacists. There are no reports on the effectiveness or subgroup analyses based on different races or intervention methods, so this study assesses the efficacy of programs supported by pharmacists in aiding nicotine-dependent smokers in quitting.

Method: We searched for articles in PubMed, MEDLINE, Cochrane CENTRAL from inception until March 2023, looking for randomized controlled trials that involved pharmacist-led interventions in individuals with nicotine addiction. Study interventions were required to target nicotine use and be pharmacist-led. The primary outcomes were abstinence rates (n=10459). A meta-analysis was conducted using a random effects model, statistical analysis that are available in RevMan5.4. Two reviewers independently assessed studies for eligibility and risk of bias was assessed using the Cochrane suggested risk of bias criteria.

Result: We reviewed 13 randomized controlled trials with 10459 participants after excluding unsuitable studies. Treatments provided by pharmacists had a beneficial effect on abstinence rates (OR 1.78 [95% CI 1.27-2.50], P=0.0008). After further analysis, it was discovered that pharmacist interventions significantly raised abstinence rates, especially in non-Asian race (OR 1.77 [95% CI 1.19-2.61], P=0.004), APP-assisted (OR 3.37 [95% CI 2.04-5.56], P=0.00001), and phone call-assisted (OR 2.08 [95% CI 1.29-3.37], P=0.003). The results did not show a significant difference in

subgroups based on Asia, face to face and Integrated Intervention.

Conclusion: This is the latest systematic review and meta-analysis study, which highlights the crucial role of pharmacist-led educational interventions in enhancing abstinence rates among smokers. Our review reveals positive outcomes resulting from such interventions, thereby supporting the importance of pharmacists in smoking cessation care for improving abstinence rates.

Prevention of non-adherence in patients undergoing treatment for mental health problems: Results of Adhvierte

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Introduction: Every year, the General Pharmaceutical Council of Spain (CGCOF) carries out annual action called Hazfarma, an initiative which, with the collaboration of Cinfa Laboratories, promotes the development of Clinical Professional Pharmacy Services through theoretical and practical training aimed at registered pharmacists. As mental health has been severely affected by the COVID-19 pandemic, Hazfarma's 8th Action was Adhvierte, an initiative on the importance of preventing non-adherence with Mental Health related treatments.

Aim: To provide community pharmacists tools for approaching and educating patients on the importance of adherence to treatment for Mental Health through the Dispensing Service.

Methods: The Action was developed between January-June 2022 through the CGCOF's continuing education platform where the training material was hosted: two theoretical modules (Mental Health after COVID-19 and Basics for the prevention, identification and assessment of non-adherence) and material for patients (information on depression and anxiety and general recommendations on antidepressant/anxiolytic medication).

In addition, a practical phase was carried out with interactive training cases and the recording of real cases on the prevention of non-adherence from the Dispensing Service using Nodofarma Asistencial Training as a recording platform.

Results and conclusions:

- 1859 participating pharmacists and 5741 cases registered.
- Patient profile: female (67.06%) between 30-69 years old (64.49%).
- Adherence to treatment of 3447 health problems related to Mental Health was evaluated, highlighting

depression (n=1986), anxiety (n=809) and generalised anxiety disorder (n=809).

- Most of the treatments dispensed were continued treatment (83.88%). After assessment of adherence with the Morisky-Green test, 60.93% of patients were found not adherent to treatment.
- Combined non-adherence was the majority (46.00%), followed by intentional non-adherence (27.17%) and unintentional non-adherence (26.83%).
- Among the barriers identified, forgetfulness (15.69%) and lack of understanding of the disease stood out.
- 11205 strategies were registered (1.75 interventions/barrier), with the most important being the reinforcement of pharmacist-patient communication (33.42%) and pharmaceutical advice: offering verbal and written information about the health problem and medicines (10.19%).

In conclusion, Adhvierte facilitated prevention and promoted pharmacist intervention in treatment adherence through the tools and skills acquired during the training.

Main difficulties in the implementation of pharmaceutical services in community pharmacies. Comparison of the situation in Paraguay and the Province of Córdoba - Argentina CPS-028

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The Community Pharmacy is a privately owned non-hospital and non-ambulatory pharmaceutical establishment that provides primary care to the population, dispensing medications and providing health care services. These pharmaceutical services, such as Pharmaceutical Care, constitute a concept of professional practice in which the patient is the main beneficiary of the pharmacist's actions, however, little growth of these services is developed within an environment of barriers and limitations. To understand the constraints that limit the development of professional practice based on services from the community pharmacy, this work was developed with the aim of analyzing the feasibility of implementing Pharmaceutical Services in community pharmacies. A comparative, observational, and descriptive cross-sectional study method was used. In the first instance, an analysis of regulations that regulate pharmacies in Paraguay and the Province of Córdoba (Argentina) was carried out. In the second part, a self-administered Likert scale questionnaire was applied, to explore, through the perception of Community Pharmacists, the difficulties for the implementation of pharmaceutical services, analyzing the dimensions of resources, attitude and vision, education and training, skills of pharmacists, and regulatory issues. Regulations of both countries regarding the concept of pharmacy, rules of ownership and ownership of the pharmacy, Pharmaceutical Care, presence of the pharmacist in pharmacies, regulation of good pharmacy practices, territorial distribution, hours of operation, and several regencies allowed were analyzed. A greater health

guarantee was observed in the pharmacies of the province of Córdoba, unlike the situation in Paraguay, where the scarce presence of the pharmacist in the community pharmacy stands out, supported by fragmented regulations. Paraguayan Pharmacists highlighted 14 "very important" barriers to the implementation of pharmaceutical services. The "lack of education in the public towards the Professional Services of Pharmacists" the most important, compared to the 8 barriers highlighted by Argentine pharmacists, being the most highlighted, the "inadequate attitude of health policymakers towards pharmaceutical care. It is concluded that there are conditions, as in many Latin American countries that hinder the viability of the implementation of pharmaceutical services, mainly the little political and legal support. It is highlighted that, in addition to the need to strengthen pharmacist education from academic degrees, it is necessary to strengthen the regulations that regulate the profession to assign powers and define the limits of the pharmaceutical professional so that the provision of services can be consolidated.

Patient information leaflet in the era of digitalization: A cross-sectional study on patients attitudes and practices

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Background: Patient information leaflet is a document that is standardized in nature and provides guidance for patients or caregivers on safe and effective use of medicines. Previous evidence suggests that written information is linked to enhancing the amount of information remembered. Currently, patients have become more involved in digital search for information. However, there is variability in the quality and reliability of information obtained from the web. According to the Saudi Food and Drug Authority regulations, pharmaceutical manufacturers are required to supplement each pharmaceutical product entering the Saudi market with a digital leaflet in addition to the paper leaflet. This research aimed to evaluate patients attitudes and practices towards patient information leaflet.

Methods: A cross-sectional study design using online anonymous self-administered questionnaire was adopted. The study took place in Saudi Arabia between October and December 2022. A convenience sampling strategy was used to recruit the study participants. The questionnaire was adapted from previous research that investigated patient attitudes and practices towards patient information leaflet.

Results: A total of 463 participants agreed to take part in the study and completed the questionnaire. Physician was the top utilized source for getting medicines information (92.7%), this was followed by pharmacist (84.7%), patient information leaflet (78.2%), searching the internet (53.6%), and consulting family and friends (31.7%). About 78% of the participants reported often or always reading patient information leaflet for new drugs (78.2%), but this

percentage was lower (45.4%) for repeated prescription. Positive perception towards patient information leaflet was observed among the study participants. While 54.6% of the participants indicated a preference for having both paper and digital information leaflet, 33.3% reported a preference for paper leaflet and 12% indicated a preference for digital format.

Conclusion: Although patients held positive perception toward patient information leaflet, physician was the top consulted source for getting medicines information. Pharmacist should educate patients about the importance of referring to patient information leaflet which could also be accessed electronically in case of a preference for a digital format as the quality and reliability of the information obtained from the web cannot be warranted.

Do you think medicines can be prescribed in a more eco-friendly, greener way? Public focus groups on the environmental impact of pharmaceuticals in the water environment.

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Background: The NHS spends over £20 billion on medicines. Unused or partially used medicines cost the UK ~£300 million.[1] Rising medicine use leads to an increasing number and complexity of biologically active pharmaceutical compounds entering public wastewater, following patient ingestion and excretion, the washing off of topical medicines, and improper disposal of partially used or expired medicines down the toilet or sink. 30-100% of a medicine is excreted into wastewater, a recent study found that 35% of people disposed of medicines in the toilet or sink.[2] Wastewater treatment cannot completely remove these, resulting in entry into rivers, lakes, and seas with effluents.

Purpose: To explore public awareness on the environmental impact of medicines in wastewater, and pro-active changes to reduce this (e.g., antibiotic stewardship, using pharmacy and GP disposal schemes, green formularies).

Method: Two, focus groups were held with members of the public in Inverness, Scotland. Six people attended one and three the other. A short presentation was given about the background to pharmaceuticals in the environment and then a wide-ranging discussion was facilitated. A range of common questions and the semi-structured nature of the interviews ensured that all participants had the opportunity to fully reflect on their experiences and contribute to the discussion. Interviews were digitally recorded and transcribed verbatim (then anonymised, and thematically

analysed by one researcher) using NVivo software. Data were iteratively analysed using the one sheet of paper technique 3.

Results: While the participants were aware of some of the issues, particularly the wild water swimmers present, they all felt there was a need for further education for all, starting at school but also to educate adults perhaps using pharmacy displays and posters. They discussed a simple red, amber, green labelling system for medicines packaging to alert people about the environmental credentials of each medicine. They also discussed overprescribing and stockpiling of medicines and the need for pharmacies to accept medicines for disposal. Prescribers, they discussed, need to spend more time with patients discussing treatment options including those other than medicines. They were adamant that they would not want their prescription changing to a less effective but more environmentally friendly one if that was an option. If it had the same effectiveness, they would gladly change. They would prefer someone else made that decision for them.

Conclusions: Clear labelling is needed on the environmental impact of medicines, more considered patient centred care, more deprescribing, waste reduction and better provision for disposal of unwanted medicines. There is also a requirement to educate the public. Data will be triangulated with data from prescriber focus groups and nominal groups along with modelling data.

National pharmacy practice standard for patient counselling about correct use of antibiotics in Norway

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Background: Norway has strict national treatment guidelines for antibiotics to promote correct use and prevent overuse and antibiotic resistance. In addition, all antibiotics are prescription-only. It is expected that pharmacists support this by counselling patients about the importance of using prescribed antibiotics correctly. However, there was no national pharmacy practice standard securing uniform and up-to-date patient counselling.

Purpose: To develop a national pharmacy practice standard for patient counselling about correct use of prescribed antibiotics in Norway.

Method: A close collaboration between the Antibiotic Centre for Primary Care (ASP) and the Norwegian Pharmacy Association (NPA) with representatives from all members, was established. ASP is a national centre of competence established by the Norwegian Institute of Public Health, working to promote rational and restricted use of antibiotics in primary care, preventing development of antibiotic resistance in Norway.

It was agreed that a national pharmacy practice standard should be based on always up-to-date knowledge about what patients need to know about their prescribed antibiotics. This knowledge was collected and compiled by expert medical doctors and pharmacists working at ASP and pharmacist from the NPA and their members.

Results: Firstly, a guideline including patient information for every antibiotic allowed prescribed in Norway was developed. This includes for instance how to take the medication, storage information, and if avoiding direct sunlight is recommended during intake. This guideline is comprehensive and should be used by pharmacists as an education tool. Then a two-pager short-version of this guideline was developed for the use at the dispensing-counter when filling prescriptions. Lastly, a one-page national practice standard was developed based on the guideline.

Additionally, short patient-leaflets about eye infection, cystitis, and upper respiratory infections were developed. These should be used during patient counselling in the non-dispensing part of the pharmacy, where the customer seeks OTC or other items for sale without prescription.

Conclusion: Together, ASP, NPA and their members, successfully managed to develop and introduce a national practice standard for patient counselling about correct use of prescribed antibiotics in Norway. All pharmacies will implement it during 2023. This should ensure that all patients receive uniform and up-to-date counselling on correct use of prescribed antibiotics at the pharmacy. Later research can be performed to evaluate compliance and outcome measures. Through this initiative pharmacist promote rational and restricted use of antibiotics in primary care, thus preventing development of antibiotic resistance in Norway. This is in line with FIP Development Workforce Goal 17 to develop a pharmaceutical workforce prepared to deliver quality services for antimicrobial stewardship.

Medicine-start for patients with type 2 diabetes

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Background: Medicine-Start is a new medicine service provided by more than half of all Norwegian pharmacies and is free of charge for the patients. The aim of the service is to increase adherence and reduce drug-related problems (DRPs). Medicine-Start has been remunerated by the National Health Insurance Scheme since 2018 for patients starting with a new antihypertensive drug, statin or anticoagulant. Patients with type 2 diabetes could also benefit from Medicine-Start.

Purpose: To investigate DRPs and pharmacist interventions in Medicine-Start for patients with type 2 diabetes, examine

factors associated with DRPs and to assess patient satisfaction with Medicine-Start.

Method: Patients received two pharmacist consultations after collecting a new antidiabetic medicine or a combination of a new antidiabetic and cardiovascular medicine. Information about patient characteristics, DRPs, pharmacist interventions and patient evaluations were collected anonymously using online questionnaires.

Results: Pharmacists at 165 pharmacies reported information on DRPs and interventions from a total of 1414 consultations in 2022. Pharmacists identified DRPs for the majority of patients in both consultations. Most of the DRPs from consultation 1 were fully/partially resolved at the time of consultation 2, and the main reason for solving DRPs were reported to be interventions from the consultations. Patient evaluations showed that most patients were highly satisfied with Medicine-Start (N = 52). Further results will be presented at the congress.

Conclusion: The results suggest that patients receiving Medicine-Start for type 2 diabetes can make an important contribution to improving adherence and reducing drug related problems in this patient group.

Pharmaceutical agreement 2022-2027: The new missions of French pharmacies

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Background: Signed on 9 March 2022 in Paris by the French Health Insurance System (CNAM), the FSPF and the USPO, the new French national pharmaceutical agreement strengthens the missions of pharmacists and establishes them as "an essential player in national screening and vaccination programmes" according to Olivier Véran, Minister of Solidarity and Health. It gives concrete form to the relationship between pharmacies and the health insurance system and endorses medium-term developments for the profession.

Purpose: The French Community Pharmacists Union (USPO) aims to enhance the value of the pharmacist's skills through the creation of new advanced services and adapted community pharmacy business models.

Method: Since 1975, the national agreement has organised the relationship between pharmacists and the French Health Insurance System. This qualitative research work, using a comparative method, made it possible to identify the new developments introduced by the new pharmaceutical agreement (2022).

Results: This new agreement reinforces the major role of the community pharmacist as a public health actor and ratifies the evolution of remuneration methods. It increases their

missions in terms of prevention, patient support and first aid, as well as their involvement in improving the proper use of health products. It also accompanies an unprecedented digital shift and, for the first time, takes into account environmental issues, a theme that the partners in the agreement intend to develop throughout the application of this new agreement.

In order to provide easier and fairer access to healthcare and to develop preventive actions, the pharmacist's competences have been greatly extended, with important innovations such as home dispensing, counselling service of preventive medication and pregnancy care, encouragement of eco-responsibility, etc.

Conclusion: The new pharmaceutical agreement recognizes the investment made by pharmacies during the Covid-19 crisis and confirms the French community pharmacist as a major player in public health.

Fostering community pharmacy practice by providing & enhancing healthcare standards in tier two and tier three cities

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Background: Community pharmacists are among the most easily accessible healthcare practitioners in tier two and tier three cities and are usually the first point of contact with the public or community. This is often due to their accessibility, credibility, and widespread within the public sector making them essential members of the healthcare team with significant contributions to the delivery of public health care distribution of life saving drugs. Community pharmacists, in addition to their known educational and awareness-raising roles, may play an essential role in risk assessment and screening of patients, early detection of disease and disorders.

Purpose: As compared to global standards, currently the penetration of medical services in India is low. The healthcare facilities in the metros can compete globally, the situation however, in tier two and tier three cities have been otherwise until recently. Most of population of tier two and tier three cities constrain themselves from early detection of diseases and disorders due to perception, attitudes and barriers and pharmacist being a first point of contact can efficiently convince them to undergo screening procedure.

Method: 500 women aged 20-60 years from a tier two and tier three cities participated in mammography screening that were conducted to understand their perception, attitudes and barriers towards breast cancer screening. 500 300 Men and 300 women aged 20-60 years from a tier two and tier three cities participated lipid profile screening to understand their perception, attitudes and approach towards heart disorder screening. Participants were led by trained pharmacist to undergo screening procedure.

Results: The pharmacy profession has been evolved from dispensing roles into more patient-oriented outcomes and pharmacists are now participating in more clinical interventions at in tier two and tier three cities. This places community pharmacists in the best position to provide the necessary knowledge and healthcare to benefit populations at risk of cancer and heart disorders

Conclusion: Active involvement of community pharmacists in the early detection care and management of cancer will significantly contribute to screening and risk assessment, early detection, treatment and eradication of breast cancer and heart disorders. As a result, the community pharmacy setting must be developed to maximize its full potential in in tier two and tier three cities

Development and consensus of a clinical management protocol for community pharmacist management of urinary tract infections in women

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Background: There is evidence from several countries that suggests pharmacists are well positioned to facilitate the assessment and a management of acute uncomplicated urinary tract infections (UTIs) in certain cohorts within the community pharmacy setting. It has become usual practice in the United Kingdom, Canada, New Zealand, Scotland, Northern Ireland and in Queensland, Australia. The development and consensus of protocols for the management, including referral, of acute uncomplicated UTIs for use by community pharmacists is a necessary process to ensure clinical governance, clinical guidance and a standardised approach to managing patients.

Purpose: The objectives were to: (i) identify international and national clinical management protocols (also referred to as guidelines) for community pharmacist management of acute UTIs in women (aged 18-65 years); (ii) map the components of the clinical management protocols; (iii) evaluate their quality; and (vi) reach consensus on the proposed clinical management protocol between key stakeholders to define and agree on a final version of the clinical management protocol for pharmacists.

Method: A grey literature search was undertaken using Google as the primary search tool following methodology developed by Godin et al. for applying systematic review search methods to grey literature. Initially, key clinical management protocols were identified by searching Google with a range of phrases, for example "protocol", "guideline", "UTI" and "cystitis". Each included protocol in the review

was appraised using the AGREE (Appraisal Guidelines for Research and Evaluation) version II instrument. The draft protocol, formatted along the lines of HealthPathways, was subjected to a consultative process with the objective of relevant stakeholders reviewing and reaching consensus. The 4-hour focus group was facilitated by Deloitte Australia in April 2023 which included practicing health professionals; four community pharmacists, two general practitioners and representatives from peak bodies.

Results: In total, 172 records were screened against eligibility criteria, 15 of which were identified as clinical management protocols for inclusion in the review. The overall quality assessment of the included clinical management protocols, irrespective of geographical location, varied significantly with three protocols considered of lower quality (overall quality ~ 28.57%). While the remaining 12 protocols were deemed low quality due to a lack of rigour and development, they met the criteria to be recommended with modification. Consensus was achieved following qualitative approval between members of the focus group and a final version of the clinical management protocol has been produced. The major areas addressed include Common signs/symptoms, Differential diagnosis, Red flags/referral, Non-prescription medications and self-care, Empirical antibiotic therapy, Recommendations on antimicrobial resistance and Patient follow-up.

Conclusion: The CMP sets out patient assessment, management, and referral criteria. The protocol will be used in a clinical trial evaluating the impact of a pharmacist led UTI service.

Feasibility of a community pharmacist-led physical health monitoring program for people living with a mental illness.

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Background: Second-generation antipsychotics (SGAs), commonly prescribed for the management of mental illness, have a high risk of metabolic complications. Regular physical health monitoring is important to promote both physical and mental wellbeing for people living with a mental illness (PLMI) and taking SGAs. However, rates of physical health monitoring have been reported to be suboptimal in this cohort. Despite being highly accessible and trusted health professionals, the role of community pharmacists in monitoring and improving physical health for PLMI remains limited.

Purpose: To explore the feasibility of a longitudinal community pharmacist-led physical health monitoring program for PLMI taking SGAs.

Method: The study was conducted in two South Australian community pharmacies from 2021 to 2022. All participating pharmacists were required to complete a refresher training course delivered by a psychologist, lived experience peer support worker (end-user), diabetes educator and dietician. The training included strategies for effective communication with PLMI, monitoring metabolic parameters, providing basic nutritional advice and study aims and procedure. The pharmacist-led program involved up to 5 three-monthly face-to-face consultations with participants over a 12-month study period. The pharmacists undertook a medical history, measurement of metabolic parameters (weight, waist circumference, serum lipid and glucose levels and body mass index) and review of lifestyle factors to set attainable person-centered goals. If necessary, referral to health practitioners, such as general practitioners could be made. Findings from the consultations are reported using descriptive statistics.

Results: A total of 17 PLMI were enrolled in the study, the majority were female (n=11) with an average age of 52 years (range 23-89). A total of 45 consultations were completed, nearly half (47.1%) of the participants attended three sessions (range 1-4). Most participants (70.5%) returned for their final 12-month consultation.

Rates of complete physical health monitoring of all five metabolic parameters, ranged from 33.3% to 100%. Blood pressure (100%), weight (92.3%), blood glucose levels (60%) and waist circumference (76.9%) were the most frequently measured parameters. The least frequently documented parameters were BMI (16.7%) and blood lipid levels (50%). Referrals to the participants' nominated GPs were made in 23 instances (51.1%) and more than half (64.7%) of the participants were referred after their first consultation. Majority of the referrals were due to physical health concerns (60.9%), 21.7% for other reasons such as referral to other allied health professionals and the remainder had no documented reason (17.4%). A total of 68 goals were set over 12 months, most (72.1%) were "specific." For example, one goal was to "[partake in] physical exercise up to three times a week. [Plan to] walk from one end to another at shopping centre [for] 15-20 minutes."

Conclusion: Measurement of most metabolic parameters at multiple time-points supports the feasibility of pharmacist-led longitudinal metabolic monitoring. In addition, goal setting between the participant and pharmacists in community pharmacies usually resulted in tailored and specific goals. Given that recruitment and retention were affected by the Covid-19 pandemic, a larger-scale study is needed. Further insight into study feasibility will be explored with PLMI and pharmacist interviews.

People living With HIV and substance use disorder perspectives of the role of pharmacists in directing their care in the United States of America

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Background: The opioid epidemic continues to have a significant and negative impact on the United States of America (USA) public health. Although the number of opioid prescriptions has decreased nationwide, Tennessee continues to rank third in prescribing in the United States of America (USA). In addition, communities of color in Tennessee are at a disproportionate risk for HIV as Black males and females are six times and 14 times more likely to live with an HIV diagnosis when compared to White males and females, respectively. Considering 9 in 10 Americans live within 5 miles of a community pharmacy, pharmacists are well positioned to interact and direct care for Persons Living With HIV (PLWH).

Purpose: To uncover the perspectives of PLWH and using opioid medications on the interaction with pharmacists.

Methods: Interviews were used as a qualitative approach for this study. This study received approval from the Institutional Review Board from the University of Tennessee Health Science Center. Recruitment of PLWH occurred via fliers in Tennessee and continued until saturation was achieved. All interviews were audio recorded and transcribed verbatim by a professional transcription service. Thematic Analysis was performed by two researchers using Dedoose®, a qualitative software that facilitates the codes extraction and emergence of themes.

Results: Sixteen interviews were conducted between December 2019 and August 2020. Each interview was approximately 40-120 minutes in length. The majority of subjects identified themselves as men (n=13) and African American (n=14).

Emergent Theme: Perceived Stigma related to opioid use.

The PLWH represents a vulnerable population at risk for negative sequela from prolonged opioid use disorder. PLWH experiences stigma, mental health conditions, and addiction at higher rates than the general USA population. There are a few quotations that depict their views:

“ Oh, I kept hearing them talk about gays in the church and stuff and all this stuff (illicit drugs), and that’s what kind of made me pull away from that lifestyle too, but I don’t have no problem sitting at home listening to gospel on TV. I just don’t want to hear that stereotype stuff...”

“...But it bothers me. You’re going to have people that stereotype your drug use (opioids) regardless, but it bothers me.”

“If [a pharmacist] had told me that it was a matter of life and death, then I would’ve been happy. I would’ve not done what I did do... If [a pharmacist] had used different language [for opioids], I wouldn’t have gone to prison.”

Conclusions: PLWH may benefit from programs that integrate mindfulness and self-acceptance solutions to decrease stigma that are needed in this population. Pharmacists have the possibility to be involved in the care of PLWH and would decrease the usage of opioid medications.

To explore the importance and relevance of the community pharmacist integrated care

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Background: Taiwan's Ministry of Health and Welfare counted more than 270,000 people with dementia 2018, which is also one of the health issues of the whole country trying to tackle.

Purpose: Some concerns can be defined while working in dementia population are the safety of medication using, the caregivers of dementia people and the cost of those services.

Methods: Case 1: Man, aged 89, identified high blood pressure at the age of 55, type 2 diabetes, and at the age of 83 he was diagnosed with moderate dementia and prostate hypertrophy. Apply seven-day medicine box for elders to organize daily medication in order to control the using of medication. Case 2: Man, 81 years old, went to pharmacy to buy diuretics, after consultation found out long-term use of psychotropic drugs, and poor urination problem. Due to his symptom of mild dementia, the elderly can not explain his situation properly while visiting doctors. Consider the need to go to the urology department, pharmacist put the main complaint of the disease into a letter, elders' medication file and business card are attached.

Results: Case 1: After integrated assessment and family care, the patient's condition was stable. Blood sugar and blood pressure tend to be stable. Case 2: Minor dementia, some medication using time error, but the prostate problem has improved.

Conclusion: Aging, multiple diseases and dementia are the causes of increasing difficulties of caring elderly and increasing medical expenditure. If community pharmacist is able to join the integrated long-term care, could also in line up with the WHO three level five-degree care.

Can we do better? A qualitative study of the interactions between pharmacists and transgender and gender-diverse people.

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Background: Many transgender and gender-diverse (TGD) people visit pharmacies to obtain health advice and for gender-affirming hormonal and other medications. TGD people have reported experiencing stigmatisation and marginalisation in healthcare settings, including pharmacies and such negative healthcare experiences have deterred them from accessing healthcare. There is, however, limited information about the interactions between TGD people and pharmacists in pharmacy settings.

Purpose: This study aimed to explore the interactions between TGD people and pharmacists in community pharmacy in Queensland, Australia.

Method: This qualitative research was part of a larger mixed method study situated in a transformative paradigm. Purposive sampling enabled the recruitment of adult TGD people who had experienced interactions with pharmacy staff, and community pharmacists with experience in providing care to TGD people in Queensland. Based on the available literature, a semi-structured interview guide was prepared and utilised by the principal investigator (SC) to conduct interviews in person, via phone, or via Zoom application, first with TGD people and then with community pharmacists. Interview data were then transcribed, anonymised, and thematically analysed using Braun and Clarke's six-step framework. Both SC and RR analysed the data to ensure intercoder reliability. Any discrepancies in coding were resolved in a discussion with the third researcher (BG). To confirm that the preliminary themes derived from the data represented their views accurately, the themes were shared with both a group of TGD people and pharmacists.

Results: A total of 22 TGD people and 20 community pharmacists were interviewed. Five main themes emerged: (1) Person-centred and non-judgemental care, (2) Privacy and confidentiality, (3) Stigma, (4) Confusion about names and pronouns, and (5) Pharmacists' knowledge gaps in TGD healthcare. Although TGD people agreed that pharmacists play a significant role in their healthcare, many discussed pharmacists' lack of knowledge about TGD healthcare issues and TGD culture. Pharmacists expressed positive attitudes towards providing care to TGD people; however, they recognised major gaps in their knowledge about TGD health. All pharmacists requested more training in TGD healthcare and communication strategies so that they could provide culturally appropriate care to TGD people.

Conclusion: Data from this study highlights the need for further education for pharmacists about TGD healthcare and culturally appropriate communication strategies. Improving interactions between pharmacists and TGD people will

improve medication management and uptake of healthcare services available through pharmacies allowing pharmacists to provide ongoing care to TGD people, thereby enhancing their quality of life. Further research is required to assess the impact of educational activities in TGD care on pharmacists' knowledge, attitudes and practice, and the health outcomes of TGD people.

Drug information sources for community pharmacy practice

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Background: A primary contribution of pharmacists in different pharmaceutical fields is accessing and appraising drug information (DI). DI must be acquired from reliable sources which are easily accessible and user friendly.

Purpose: To assess the use of DI sources utilised by pharmacists and other healthcare professionals in a patient care setting. Qualities and features of the local database made available by the Malta Medicines Authority (MMA) and other non-local databases were compared.

Method: A questionnaire was developed and sent out to 68 community pharmacies across the islands via stratified random sampling, asking specific queries related to DI usage by pharmacists. This first questionnaire sought information about which population group/s frequent the pharmacy mostly, what questions patients typically ask regarding the use of a medicinal product and what DI sources pharmacists use. In a second questionnaire distributed to the same sample, relative use of local and international databases (IDs) was compiled.

Results: The first questionnaire's response rate was 68% (n=46). The second questionnaire's response rate was 45% (n=30). The elderly were the most frequent population group reported to attend community pharmacies, with dermatology being the most sought-after speciality service at community pharmacies. The most common patient queries were regarding method of administration (n=46), indication and product prices (n=42) and adverse effects (n=35). Nine pharmacists reported that product prices were mostly difficult to answer. Online sources and the British National Formulary (BNF) were the most prevalent sources at the pharmacy (n=46). PubMed and Drugs.com were significantly sought-after despite being secondary sources, with 40 respondents choosing one or both as their preferred databases.

In the second questionnaire, when HCPs sought DI from the local database, they were most likely to search for product availability (n=20), API identification (n=17), product status (licensed or withdrawn) and whether the product exists as a POM or OTC medication (n=12). In clinical context, pharmacists tend to search drug usage (n=17), drug-drug interactions (n=15) and pregnancy, lactation, and fertility data (n=11). MEDSCAPE App was the most commonly used

ID (n=19) and 24 of the respondents thought that a limitation of ID databases was that information on products available locally was lacking.

Conclusion: In community pharmacy practice, DI sources originating from online platforms and the BNF are frequently used. DI knowledge regarding dermatology and geriatrics were highlighted due to relative frequency. DI sources utilised by community pharmacists are predominantly online platforms with particular preference to databases that are available for handheld devices.

Community pharmacists' role in the management of peripheral neuropathy

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Peripheral neuropathy is a condition in which the nerves in the peripheral nervous system become damaged, and often causes weakness, numbness and pain, usually in the hands and feet. It is estimated that 2% to 7% of the general population suffers from peripheral neuropathy. Older people and patients with diabetic 2 disease have a higher risk of developing peripheral neuropathy. Distal symmetric polyneuropathy is a major contributing factor for diabetic foot ulcer, osteoarthopathy, osteomyelitis, and lower limb amputation. The latter is fifteen times higher in diabetic patients than in the general population. Neuropathic pain affects approximately 16% of diabetic patients. This subjective symptom impairs quality of life and sleeping as it usually gets worse at night. It is often the major complaint that motivates patients to seek health care.

Community pharmacists can play a large role in helping people with peripheral neuropathy manage their condition and maintain a good level of quality of life by offering both useful pharmacological and simple non-pharmacological therapy and advice. Pharmacists have regular interactions with people living with type 2 diabetes to supply medications, and have a potential role in supporting other primary care professionals in the screening, management, monitoring and facilitation of timely referral of microvascular complications.

This study aimed to investigate the contemporary and future roles of community pharmacists in diabetes-related microvascular complication management.

Pharmaceutical advice for this problem is to take 600 mg of L-lipoic acid once a day for a minimum of 5 weeks.

100 patients with type 2 diabetes were analyzed. Each of them was given a recommendation for taking these supplements as well as non-pharmacological advice.

Recently, trials have been conducted with neuropathic diabetes patients who received 600 mg alpha-lipoic acid. The treatment reduced pain, paresthesias, and numbness. Treatment with alpha-lipoic acid increases reduced glutathione, an important endogenous antioxidant. In clinical trials, 600 mg alpha-lipoic acid has been shown to improve neuropathic deficits. Alpha-lipoic acid has been

shown to improve motor-nerve conduction velocity in experimental diabetic neuropathy, and to protect peripheral nerves from ischemia in rats. Pharmacists are important with their triage to detect that the patient has polyneuropathy and to give advice for the right supplement. This is where the pharmacist's role in pharmacotherapy is very important.

Pharmaceutical counseling service for elderly patients on the safe use of medicines-The attitudes of pharmacists

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Elderly patients mostly use a large number of medicine. Pharmacists can contribute significantly to the rational use of medicines during the process of dispensing medicines and patients counseling.

The aim of this study is to examine the attitudes of pharmacists about the services of counseling elderly patients on the safe use of medicines.

Study include 45 pharmacy in Montenegro using questionnaire designed for this research.

This study included 95 pharmacists, aged 35.3 and 5.5 years of service in average. When it comes to information on medicines, patients mostly trust physicians (41%), pharmacists (37.2%), general practitioners (12.8%) and friends (9%). Pharmacists often provide information on medicines use, indications, duration of administration, medicines interaction with food and other medicines and adverse drug reactions. The most common barrier for adequate counseling of patients was crowding in the pharmacy, to much work and overbooking of pharmacists.

Pharmacists think that the counseling service of elderly patients about safe use of medicines is of great importance for the quality of health care. This type of analysis can provide guidance on how to develop and implement pharmaceutical services.

Responsible first-hand counseling— understanding the patient and yourself

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Pharmacy and pharmacists represent the first and last meeting with patients and therefore provide great help in the correct taking of medicines and further therapeutic outcome. This education combines the traditions of pharmacy practice with a psychologically-based theory of interaction, i.e. mentalising, in order to achieve the best possible pharmaceutical service. Studies on pharmacy

interactions show that patients' perspective of sharing is rarely sought out actively by pharmacy staff during the desk meeting. The role of the pharmacist is to build models that will give him access to the mental aspects of the patients in order to assess the importance of what needs to be communicated. The ability to understand the meaning of other people's behaviour and the way this behaviour affects oneself promotes an experience of well-being and protects professionals from the impact of distressing events and adversity. There are several underlying causes for stress and burnout in the pharmacy workforce, amongst them being time constraints and performance metrics. Preventing and overcoming stress and burnout in healthcare professionals includes leadership involvement, peersupport and awareness of chosen incentives.

The aim of this communication is to increase the awareness of the pharmacists who work with patients about the psychological understandings and moments of the patients, in order to direct the interaction in the final direction to the perspective of the patients themselves and elevate the pharmacists to the level of health care professionals.

Travelling to Portugal: Medicine equivalence

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CEDIME provides scientific support to nearly all community pharmacies in Portugal. Through a team of pharmacists, pharmacies have access to technical-scientific and regulatory information about medicines, health products, medical devices, and health interventions.

One of the major areas of questioning is that of Medicines Equivalence. Due to tourists, immigrants, and refugees – as of late mainly from Ukraine due to the war – Pharmacies are usually presented with the need to find an equivalent medicine available in Portugal, safeguarding the continuum of medicine treatments.

The aim was to support pharmacies with tools to better answer patient's needs, compiling the access to the various sources of information per country, easing the process of finding equivalent medicines to improve the efficiency and quality of pharmaceutical care.

CEDIME's contact information database was used as a baseline for identifying the most frequent countries of origin of this type of request. Once this process was completed, the next step was to locate the best sources of information per country and provide toolkits which include step-by-step guidance and links to the main reference databases, while also equipping the support team with the needed tools.

Our documents were read by over 860 pharmacies and the number of calls received regarding this topic reduced 15% year over year.

CEDIME created documents to support practice, acting as an enabler by allowing pharmacies to answer these questions autonomously, in an appropriate time frame and ensuring patient safety and contributing to the correct use of the medication.

Expanding scope of practice: Protocol for the evaluation of the management of urinary tract infections (UTIs) by community pharmacists

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Background: There have been a number of major studies into the pharmacist led management of Urinary tract infections (UTIs), However there are limited robust studies in the peer reviewed published literature, highlighting the need for further evidence. The State Government of New South Wales (NSW), Australia, has recognised the potential of community pharmacists to increase their scope of practice and is sponsoring a clinical trial to evaluate community pharmacists' management of UTIs.

Purpose: The purpose of this study is to evaluate the implementation and clinical impact of a service model delivered by community pharmacists in NSW for managing UTIs in women aged between 18 and 65 years. The study aims to assess the effectiveness of the service, appropriate use of antibiotics, impact on other health service resources, and impact on supporting self-care. The study will also investigate the implementation process and potential for future sustainability of the intervention using an implementation science framework.

Method: An observational cohort study was chosen using a mixed-methods design. The study will be conducted over a 12-month period, including a 2-month feasibility study and a 10-month intervention period. The intervention consists of pharmacy training and support, pharmacy consultations using a co-designed clinical management protocol and an IT program to guide the service delivery and secondarily as by product collect date. Participants will be assessed at the registration visit and will include basic demographic and clinical information. Those assessed as eligible to participate in the trial will be followed up at Day 7 post registration to assess outcomes. The collection of the implementation data will be undertaken through visits/contacts (at least monthly) to community pharmacies by trained practice change facilitators. Semi-structured interviews will be conducted with pharmacists and other stakeholders to understand barriers and facilitators to implementation of the service. Quantitative analysis will be undertaken to determine clinical impact and implementation outcomes. Descriptive statistics will be calculated for all study variables. Continuous variables will be reported using the appropriate measure of central tendency. Categorical variables will be summarized as proportions. Analyses will be conducted using SAS and R. Transcripts will be imported into NVivo for

thematic analysis. Initial open coding of transcripts will be undertaken iteratively by members of the research team. The CFIR domains and sub-domains will also be used to organise the data.

Results: The primary outcome will be self-reported 7-day symptom-free rate, with secondary outcomes including rates of primary care and medication utilization, hospital service utilization, patient experience, and safety outcomes. Implementation outcomes will also be assessed, and sub-group analyses will be conducted to examine variation in outcomes based on participant demographics, geography, clinical characteristics, and pharmacy-level characteristics.

Conclusion: This study will provide valuable insights into the effectiveness and implementation of a service model delivered by community pharmacists for managing UTIs in women.

Positive practice and professional sustainability: supporting the international community pharmacy workforce. An international project by the FIP Community Pharmacy Section

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Background: Meeting the growing demands on health systems is having a significant impact on the wellbeing of all health professionals. Community pharmacists and pharmacies have played a pivotal role in the fight against the COVID pandemic which has placed increased workload pressure and subsequent effects on the wellbeing of pharmacists worldwide. Furthermore, the changing roles and evolving scope of pharmacists may also be exerting additional role stress in the workplace. Pressures on supply chain of medicinal products and pharmacy staff shortages are also contributing to a more difficult professional practice. The evolving economic, professional practice and workplace pressures need to be addressed and it is critical for all pharmacy workplaces to be supported with evidence-based strategies that can be adapted to foster positive mental health and wellbeing.

Purpose: To better understand the workplace pressures faced by community pharmacists worldwide, and to explore pharmacists' views on the strategies to best support the workforce for these increased pressures through the generation of a policy position and a series of evidence-based recommendations for member organisations of FIP and individual members to adopt, as part of a FIP CPS report.

Method: The Community Pharmacy Section of FIP has undertaken global research using a mixed methods research

design. The research has incorporated three phases to meet the objectives of the research including: (1) a literature review, (ii) a series of six townhall style regional meetings and (iii) a global survey of community pharmacists. The online survey was developed using QuestionPro. The survey data was exported into Excel and analysed using descriptive statistics. The qualitative data was coded and thematically analysed.

Results: It is clear from the findings that several issues raised relate, specifically, to community pharmacy. These include inadequate staffing, lack of protected learning time, lack of colleague or senior support, long working hours, and lack of rest breaks, which are not being addressed. The work environment and working conditions clearly have a huge impact on pharmacists' wellbeing. This work identified gaps for policy development and a set of recommendations for national organisations to better support community pharmacists in their region.

Conclusion: This is a critical piece of work exploring how FIP, and their member organisations, are currently supporting, and can better support individual community pharmacists for professional sustainability. To accommodate pharmacists' expanding scope of practice and services, positive workplace environments are needed. Pharmacists and their staff must have continued access to wellbeing and occupational health support. Further research should expand on this work to investigate solutions for changes to foster a better workplace environment for pharmacists and characterise the impact of pharmacists' workplace pressures and wellbeing on patient-centred care.

Community pharmacist management of urinary tract infections: A systematic review

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Background: Urinary tract infections (UTIs) affect 50% of women in their lifetimes and constitute a high proportion of primary health care visits annually. To improve patient access to care and promote a sustainable model of care, the role of community pharmacists is evolving to include the management of UTI with the ability to prescribe an antibiotic e.g., trimethoprim, nitrofurantoin or cephalexin for uncomplicated UTIs. Although in several countries, and in an Australian state, it has become usual practice, the evidence of impact in peer reviewed literature has not been analyzed.

Purpose: To synthesize the peer reviewed literature for evidence of community pharmacist management of uncomplicated UTIs in women aged 16-65 years.

Method: A systematic review was performed in PubMed, PsycINFO, Scopus, Cochrane, CINAHL, EMBASE, and Web of Science to identify peer-reviewed studies evaluating

community pharmacist management of UTIs in the target population. The search was reported using PRISMA guidelines. A range of outcomes were examined which included symptom resolution, adverse events, patient satisfaction, guideline concordance for antimicrobial prescribing, appropriate referral to another health setting, health care utilisation and cost effectiveness. A quality assessment of included studies was undertaken using JBI Critical Appraisal Tools.

Results: In total, 2129 records were retrieved. After removal of 930 duplicates, 1,199 remained for screening by title and abstract. Once full text screening was complete, ten publications were finally included in the systematic review. No additional publications were included because of searching the citations of these ten papers. The evidence found in studies were associated with a trend for positive clinical and economic outcomes. One study reported a symptom resolution rate of 88.9% at follow up. Another study reported at follow up, 8.7% of patients had unresolved UTI symptoms and 6.6% had seen a general or emergency physician since consultation. Only one publication focused on cost effectiveness from a publicly funded health care perspective, showing pharmacist management to be less costly but having similar quality-adjusted life months. Their budget impact analysis predicted that if 25% of the target population were to utilise the pharmacy service through public funding, it would result in a net savings estimated at \$2.9 million in the first year and \$16.3 million in 5 years.

Conclusion: Although there were limitations in the papers reviewed, they provide limited evidence that community pharmacists, with appropriate training and support, can treat UTIs in women in a safe, effective and timely manner, whilst upholding and strengthening their role as antimicrobial stewards. However, more robust evidence is required to make definitive statements about the impact of pharmacist management of UTIs.

The cost of Ozempic-induced weight loss: A temporary solution with lingering consequences

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Background: Ozempic (semaglutide) is a medication used in the treatment of type 2 diabetes. It has gained significant attention in recent years due to its intensified marketing by famous individuals and social media influencers, as a promising weight loss drug. Although Ozempic isn't registered for weight loss, its off label use led to growing demand, causing shortages in inventories and supply chain, and most importantly affecting the treatment of diabetic patients. Additionally, in spite of its' shown promising effects in aiding weight loss, there are important risks associated with its use that must be considered, because of its popular off-label use.

Objectives: To investigate the usage patterns and availability of Ozempic in Republic of Srpska, with a focus on its off-label use for weight loss and insulin resistance.

Methods: The survey was conducted among 30 pharmacies in Republika Srpska, from January 2023 until end of March 2023. We collected data on the number of Ozempic prescriptions dispensed, the indications for which it was prescribed, and the source of payment (health insurance fund or commercial). We also surveyed pharmacists on their role in dispensing Ozempic, the implementation of pharmaceutical inspection controls, and the need for prescription or medical reports for its off-label use.

Results: Most of the Ozempic prescriptions issued were intended for type 2 diabetes therapy and were funded by the health insurance fund. Pharmacists reported an increase in the prescription of Ozempic for treating insulin resistance and obesity, and as a result, pharmaceutical inspection implemented stricter controls. To purchase the drug commercially, patients are now required to present a prescription or a medical report. Pharmacists also highlighted that during this three-month period, there were instances of Ozempic shortages due to increased drug demand for weight loss, leading some patients with type 2 diabetes to seek the medication in neighboring countries.

Conclusion: Despite receiving a lot of media attention, Ozempic and other GLP-1 medications are not indicated for use in patients outside the target population, which may experience more severe side effects, because the medication has not been thoroughly evaluated in those with lower body weights. The risks for the unknown side effects is thus significantly increased and should be monitored in both long and short term usage. The temporary nature of Ozempic-induced weight loss and the potential for weight regain after discontinuing the medication should be emphasized to patients and healthcare providers. Furthermore, the availability of Ozempic for people with type 2 diabetes is significantly impacted by this off-label use of the drug. It is necessary to raise awareness and promote a more holistic approach to weight management that focuses on healthy lifestyle changes rather than solely relying on medications like Ozempic.

Compounding personalized medication: What training is required per the revised USP <795>?

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Background: The newly revised USP General Chapter <795> Pharmaceutical Compounding – Nonsterile Preparations set to become official November 1, 2023 lays out specific requirements for training, and documentation of training, for anyone who prepares compounded nonsterile

preparations (CNSPs). This is new when compared to the current chapter that was last revised in 2015.

Purpose: The purpose is to identify training requirements in the newly revised USP General Chapter <795> Pharmaceutical Compounding – Nonsterile Preparations

Methods: Each state in the United States has its own rules and regulations regarding compounding, and many have adopted the USP standards either in whole or in part. USP <795> requires all places where nonsterile human and animal compounding occurs to meet the newly revised chapter's minimum standards. Regulatory jurisdictions may choose to impose more stringent requirements. Pharmacies in the United States must be licensed in their resident state and states where they ship or deliver medications. The Drug Quality and Security Act (DQSA) was passed in 2013 and affirmed restrictions on compounding passed under the Food and Drug Administration Modernization Act (FDAMA) in 1997, including when compounding may occur and what ingredients may be used. The newly revised USP <795> further lists training required of personnel who prepare CNSPs. All of this information should be considered when creating a plan and processes for training personnel who will be performing nonsterile compounding.

Results: The complexity of rules, regulations and standards when compounding nonsterile personalized medications supports the use of a standard operating procedure (SOP) to outline required training.

Conclusion: Compounding allows for personalized medication to meet a patient's specific need. Compounding allows flexibility in dosing and offers options when commercially-available medications are either not available or not suitable for the patient. Having personnel who are trained and have demonstrated their competency in compounding nonsterile preparations is necessary to meet the minimum requirements for trained personnel in USP 795. Having trained personnel minimizes the opportunity to harm a patient with a compounded medication.

Role and efforts of maharashtra state pharmacy council for registered pharmacist & society at large through pharmacist's continuing education

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Background: Maharashtra State Pharmacy Council (MSPC) apart from prime function to grant registration to the eligible pharmacists possessing requisite qualification, Drug Information Centre (DIC) set up by MSPC offers Continuing Education Programmes (CEP) to all registered pharmacists, especially, hospital and community Pharmacists.

Purpose: The aim of present work was to critically review and assess activities of Maharashtra State Pharmacy Council

(MSPC) in the view of radical reforms likely to be brought about by implementation of Pharmacy Practice Regulation 2015 (PPR) in India.

Method: DICs started in state have been effective in counselling patients on appropriate use of medicines, dosing, side effects and adverse effects. DIC of KEM hospital Mumbai is a mile stone counselling station for diabetics and patients suffering from nervous disorders. The concept of M+M (medicine + more) is picked up by retail pharmacists and has shown huge enrolment. Training sessions organised by MSPC on knowledge, attitude, good pharmacy practice, along with patient counselling on meal and medicine, hypertension, diabetes, asthma, anti-tubercular drugs, antibiotics has proved effective in shaping pharmacists professionally. Exceptionally, sensitisation programmes arranged by MSPC in Pharmacy colleges have created manifold aspirations in budding pharmacists. As an attempt to enhance medication adherence, patient communication and follow up through SMS, facebook, WhatsApp, LinkedIn etc. has been found to be effective. Conclusively, involvement of MSPC, doctors, pharma-academicians, community pharmacists in training to community/hospital pharmacists has been a effective model, which has given birth to family pharmacist. Such model may be needed for every Indian State to revolutionise pharmacy profession in post PPR era.

Results: 3000 feedback forms collected from pharmacists, during span of three years (74 PCC conducted) were assessed considering main domains like: awareness of good pharmacy practices, community pharmacy knowledge imparted, Technology updating (skill development), vision imparted and attitude building in pharmacists. The attempts to empower female pharmacist were also assessed

Conclusion: MSPC ranks at the top for CEP activities implementation for up gradation of Pharmacists. Feedback analysis has revealed the professional development of community and hospital pharmacists. The role of DIC set up has been instrumental in reducing medication errors in community pharmacy. Thus, such initiatives is a need of hour for all Indian states to revolutionise pharmacy profession in India, post PPR 2015 era.

Patient centric services in Indian community pharmacy scenario

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Background: India is a country of villages. In 2009 number of registered Pharmacist with MSPC (89K) but Practicing retail, wholesale Pharmacist number was (49K), Comparing to the services provided in foreign countries like U.S , Europe and

Australia there was a gap in Indian local Retail medical shop. There were few brands like The medicine shopee Subhiksha, Apollo NETMED ,but they established themselves in metro cities. They had drawback as they were business oriented and little did they cared about Patient.

Purpose: The aim of present work is observe and critically review and assess Role of m + m (medicine + more) model which started under the guidance of MSCDA in the view of increasing professional value and benefit of Pharmacist by increasing Patient oriented services and changing role of Pharmacist from just medicine business to important Health Care Professional.

Method: Our vision mission is to promote the role of PHARMACIST through value added services by initiatives to next level by m + m pharmacy models. In 2009 First pharmacy that was established under this model was Jaybhawani Medical. Before starting medicine + more sale was 30,000 Rs which increased upto 1.2 Lakh per day that was 4 to 5 times more than initial sale through m + m model. Due to this success almost 1685+ retailers happily joined with our m + m model.

Our Initiative m + m pharmacy had enabled today's pharmacist to get this professional look and provide better services like anyone other. m + m pharmacy model also empower pharmacist to do patient counseling on Food interaction, Drug interaction ,increase patient adherence, helping understand Nutritional information, Adverse Drug Reaction. The major example of this was DOT Therapy program for Tuberculosis. m + m pharmacy model made every retail pharmacist competent.

This changed the identity of PHARMACIST from being Business oriented health care provider to a Parent Pharmacist. Consumers started trusting Pharmacist so much eventually they turned into FAMILY PHARMACIST.

Results:-This model satisfied Patients by Patient counseling, safe use of medication, any kind of interactions and proper adherence to medicines. The trust of patients increased to such extent that they preferred going to same shop for all their pharmacy needs. Till now 1685+ Retail shop joined our regular m + m model and 16+ m + m exclusive model. Also increased patient footfall in pharmacy.

Conclusion: Due to m + m PHARMACIST identity changed from just Medicine seller to HEALTH CARE PROFESSIONAL. In India many rural area where Physician are not available our m + m shop trained Pharmacist are available to provide first aid and primary health services to them. Just like Family Physician our Pharmacist is also playing role as FAMILY PHARMACIST through his value added services like patient counseling, drug interactions information, Nutrient management etc. This is achieved due to m + m model, training by MSPC and MSCDA role in launching such m + m model.

Development of the pharmaceutical prescribing protocols for PrEP and PEP by the federal pharmacy council

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Background: The authorization of pharmaceutical prescription of pre- and post-exposure prophylaxis to HIV within the Brazilian Unified Health System is an important step in expanding the access of the population to these two medications that are part of the combined prevention strategy. For pharmacists to be able to perform this clinical activity supported by the current legislation (Resolution n 720/2021), two protocols for the clinical practice of professionals in HIV prevention were developed by an advisory work group of the Federal Pharmacy Council.

Purpose: To present the Pharmaceutical Prescribing Protocols for PrEP and PEP developed by the Federal Pharmacy Council

Method: This is a descriptive study of professional experience, focused on the presentation of the clinical protocols developed to underpin the pharmacist's clinical practice in HIV care and prevention.

Results: The protocols were built between June 2022 and March 2023, by a working group formed by pharmacists in the area of HIV preventive care. The documents are composed of information about the epidemiological and socioeconomic characteristics of HIV infection in the world and especially in Brazil, legal frameworks that support pharmaceutical practice in the context of HIV prevention, eligibility criteria for the use of both prophylaxis, conduct of pharmaceutical consultation, prescription, follow-up and monitoring of drug use. In addition, it presents the pharmacist as an important tool in health education in the context of combined prevention.

Conclusion: We hope that the protocols will be a model for implementation in various regional contexts in Brazil and around the world so that the access to these prophylaxes can be expanded and the goals set for HIV eradication and control can be achieved.

Pharmaceutical care for the LGBTQIA+ population: Initiatives of the Brazilian Federal Pharmacy Council in training for gender equity

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Background: According to several international studies, pharmacy is a strategic health service for vulnerable populations, including LGBTQIA+. Given this scenario, it is essential to promote equitable pharmaceutical care for LGBTQIA+ people and to provide a broad discussion on this issue in the Federal Pharmacy Council (CFF).

Purpose: To describe the creation and performance of the working group (WG) of Pharmaceutical Care to the LGBTQIA+ population and other vulnerable populations of the CFF autarchy.

Method: This is a descriptive study of professional experience, focused on the historical delimitation of the motivations and activities developed by the WG of Pharmaceutical Care to the LGBTQIA+ population and other vulnerable populations and the

Results: The CFF, after contact with experts and the Working Group Pharmacists for Diversity (an initiative supported by CRF-BA), created the workgroup formed by LGBTQIA+ pharmacists and allies. The WG is working on creating legislation and protocols to support the pharmaceutical prescription of PrEP/PEP, an online course for pharmaceutical care to LGBTQIA+, and working with national stakeholders to minimize damages related to viral hepatitis and vertical transmission of infections in vulnerable populations. The WG seeks to support national policies that promote comprehensive and equitable care to LGBTQIA+, including access to and rational use of medicines and a qualified supply of pharmaceutical care. In addition, the WG has the potential to expand the debate on the theme within the profession, which can reflect in the training of new professionals, qualification of trained professionals and improve the perception of the ethical duty of pharmacists to the needs of the LGBTQIA+ population. As expected products of the work of the GT this year, there is the launch of a course in hybrid modality on Pharmaceutical Care for the LGBTQIA+ population that will be offered free of charge to the entire pharmaceutical category enrolled in the CRF/CFF systems.

Conclusion: CFF's support and maintenance of an active and well-inserted GT on Pharmaceutical Care to the LGBTQIA+ population nationally represents a historical moment within Brazilian pharmacy. This action marks the transformations and updates of the category regarding professional

attributions in health systems, focusing on the best interest of its users, considering their diversities and peculiarities.

Sore throat and antibiotic resistance (STAR) study: Preliminary global findings and opportunities for pharmacists

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Background: Understanding behaviours and attitudes to antibiotics can inform interventions to enhance awareness of antimicrobial resistance (AMR), especially for respiratory tract infections (RTIs), where inappropriate use is high.

Purpose: To generate a quantitative snapshot of behaviours and attitudes related to RTIs across 12 countries, and to understand the use of antibiotics and the attitudes towards them in order to generate insights that can drive behaviour change.

Methods: This was an observational, cross-sectional, questionnaire-based study. Adults from Brazil, Germany, Spain, Italy, Mexico, the Philippines, Poland, Romania, Saudi Arabia, Thailand, the United Kingdom and South Africa (n=1000 per country) who had experienced symptoms of a RTI in the previous 6 months were recruited from a research panel. Structured online interviews were conducted, and information was collected on antibiotic use and attitudes towards antibiotics, respiratory symptom counselling and bacterial resistance.

Results: The sample comprised 18,564 screened people; 12,000 had symptoms of a RTI in the last 6 months that they had treated in some way. Overall, 86% (n=10,320; range: 77–93%) of participants sought some form of advice on how to treat their respiratory symptoms on the last occasion; 39% (n=4680; range: 30–52%) consulted a pharmacist. Of those that sought advice, 52% (n=6240; range: 41–61%) were advised to get a product from the pharmacy, while 31% (n=3720; range: 19–47%) were prescribed an antibiotic. In total, 53% (n=6360; range: 34–80%) of participants had taken antibiotics at least once for a RTI in the last 6 months; throat infection was the highest reported reason (37%; range: 23–66%). In addition, 16% (n=1920; range: 11–27%) of participants stated that their last course of antibiotics was provided by a pharmacist without seeing a doctor first, and 16% (range: 12–19%) used leftover antibiotics. Furthermore,

27% (n=3240; range: 15–55%) of participants stated that AMR was discussed with them by the healthcare professional when antibiotics were provided.

Conclusions: Pharmacists are often the first point of contact for patients for advice on RTIs, meaning that they are well placed to provide advice on symptomatic treatment options. These interactions also provide opportunities for further interventions to mitigate AMR.

Addressing consumer misconceptions on antibiotic use and resistance in the context of sore throat on social media: Teachable moments for pharmacists

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Background: The extensive use of social media provides an opportunity to explore consumer conversations related to antibiotics and antimicrobial resistance (AMR) and identify consumer beliefs and misconceptions. Insights can then be used to inform strategies and resources for healthcare professionals (HCPs), which can be used to educate consumers and help mitigate AMR.

Purpose: To analyse with pharmacists, using the Global Respiratory Infection Partnership (GRIP) Ask; Customise; Empower (ACE) model, consumer conversations around antibiotic use and AMR in the context of sore throat across a range of social media platforms.

Method: A multinational, observational, consumer content analysis study across eight countries (Germany, Italy, Spain, Mexico, Brazil, Thailand, Romania, and Russian Federation) evaluated social media conversations around AMR and sore throat and how coronavirus disease 2019 affected online conversations between 1 January 2018 and 25 November 2021. At this point, five distinct groups of antibiotic consumers were identified (antibiotic-preserving peer educators, antibiotic-cautious consumers, medication-resistant antibiotic opponents, believers in the strength of antibiotics, and determined pro-antibiotic consumers). Key themes from the social media research were presented to an international group of pharmacists attending a GRIP

workshop, to ascertain their role as educators on social media. The workshop was held at the 80th International Pharmaceutical Federation (FIP) meeting.

Results: Pharmacists recognised the five consumer profiles presented to them. They provided examples of statements that consumers were likely to express within each profile. Example statements for the five consumer profiles are as follows: 1) Antibiotic-preserving peer educators: "I need to educate my family on how to measure doses correctly to prevent under- or overdosing"; 2) Antibiotic-cautious consumers: "I had an allergic reaction when I used antibiotics and I do not want to risk getting another allergic reaction"; 3) Medication-resistant antibiotic opponents: "I do not want to take chemical products"; 4) Believers in the strength of antibiotics: "Antibiotics always treat my infection quicker"; 5) Determined pro-antibiotic consumers: "The 3-day treatment course of azithromycin works well for me". In addition, pharmacists identified actions HCPs could take to overcome consumer misconceptions: 1) ask consumers what they are looking for and probe to identify any misconceptions; 2) customise messages to address consumers' specific needs; 3) empower consumers to make the right health decisions.

Conclusions: Utilising the GRIP ACE model allows the right questions to be asked to identify consumers' needs and misconceptions. In addition, the model allows HCPs to customise messages, and empowers consumers with the knowledge required to understand and manage their illnesses.

The impact of the community pharmacist on the early detection of Diabetes Mellitus

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Background: According to the International Diabetes Federation (IDF), "Portugal has the second highest standardised prevalence of diabetes in the 27 countries of the European Union". In the EU, the prevalence of diabetes in 2021 was 6.2% in the population aged between 20 and 79 years, while in Portugal it was 9.1%.

Purpose: Identification of new patients with undiagnosed pathology; Follow-up and monitoring of blood glucose levels of diabetic patients; Evaluation of parameters that represent risk factors for the worsening of the pathology (diet, physical exercise, weight and BMI monitoring and prevention of associated complications).

Methods: The study was done during April 2021 and involved two interventions:

- Promoting health literacy among patients with Diabetes, acting to raise awareness of an earlier diagnosis (dissemination of communication materials in the media);
- Screening based on measuring the glycaemic index of patients with diagnosed and undiagnosed pathology, as

well as determining weight and body mass index, diet and physical exercise.

The data analysis was performed in Excel®.

Results: Of the pharmacies involved, 103 involved 6695 people, of which 68% were female and 53% were aged between 55 and 70 years. Of the individuals assessed, 76% presented altered glycaemic level values (fasting \geq 100 mg/dl; postprandial \geq 140 mg/dl), without a previously established Diabetes diagnosis, and of these, 42% presented overweight (BMI \geq 24.99 kg/m²). Of the 24% of diabetic patients who participated in the screening, 23% were overweight (BMI \geq 24.99 kg/m²), 40.5% did not have controlled glycaemic level values (fasting \geq 126 mg/dl; postprandial \geq 200 mg/dl), 17% stated that they were careful with eating habits, 11.5% stated that regular physical exercise is part of their daily routine and 10.5% stated that they had already had at least one complication associated with Diabetes (including diabetic foot, hypertension, neuropathy).

Conclusion: The results obtained enabled the detection of patients with uncontrolled parameters and reinforced the importance of pharmaceutical intervention in the early detection of Diabetes Mellitus, contributing to a reduction in morbidity and premature mortality, with consequent gains in health and above all in improving the quality of life of the patients.

The impact of the COVID-19 pandemic on the mental health of the Portuguese population

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Background: The COVID-19 pandemic had a huge impact on the overall health of populations, including mental health: directly due to the consequences caused by the viral infection and also due to the social and economic changes, caused, in large scale, by the measures taken to control the spread of the virus globally.

Objectives: To assess the impact of the COVID-19 pandemic in terms of Mental Health, translating into signs of Anxiety and/or Depression; To identify the number of patients who required follow-up during lockdown; Impact of Mental Health on professional/family activities.

Methods: The study took place during September 2021 and involved two interventions:

- Promoting health literacy and the journey of patients with Depression, acting to raise awareness of earlier diagnosis (dissemination of communication materials in the media);
- Implementation of a questionnaire that aimed to obtain the following information:
 - o Knowledge about Anxiety and Depression;
 - o Need for psychological support;
 - o Symptoms during lockdown;

- o Interference of mental state in professional/family activity;
- o Reasons that interfered in the mental state;
- o Strategies to control Anxiety and Depression.

Data was collected using a Formsapp® form developed for this purpose (Figure 2), and analysed using Excel® software.

Results: From the pharmacies taking part in the project, 103 involved 5871 people, of which 78% were female and 45% were aged between 41 and 60 years. Of the individuals assessed, 94% claimed to have knowledge of what Anxiety and Depression is, 74% revealed that they needed a follow-up by a health professional and 63% of the patients stated that the alteration in their mental state interfered with both their professional and family activities. The most experienced symptoms were anxiety (22%), worry (21%), tiredness (16%) and sleep disturbances (12%). The main reasons that interfered with the mental state were fear of getting infected/family members to get infected (24%), home isolation (22%) and lack of social contact (18%). The strategies used to control Anxiety and Depression included seeking help from a health professional (42%), resorting to therapy (21%) and seeking help from relatives/friends (20%).

Conclusion: The community pharmacist is an excellent ally in early interventions in chronic diseases, and it should be a national and global concern to standardise the implementation of Depression screening in community pharmacies, thus contributing to timely intervention in Depression, reducing its impact on the marked loss of quality of life of the population. Considering that the worldwide prevalence of depression continues to increase, the active intervention of the community pharmacist in the awareness, sensitisation and early intervention of depression may be a great asset in the fight against this disease.

A quality system for French community pharmacies

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The “Démarche Qualité Officine” (DQO) is a specific quality system for French community pharmacists, that has been developed since 2018 by the French Chamber of Pharmacists, as well as community pharmacy unions, associations and students.

The role of the quality system is to provide a framework and common resources to guarantee the continuous improvement of practices. This system aims at 4 main objectives: enhancing quality of care, increasing patient safety, improving patient satisfaction and supporting the development of new missions at the pharmacy.

The DQO is a voluntary quality system that is complementary to other private quality systems. All participating pharmacists are provided with a self-

assessment questionnaire, a reference document, a set of common rules and principles, a toolkit, memos, procedures, checklists, etc. As part of the quality system's roadmap, a quality reference system was developed and serves as a common basis of principles to improve the pharmacy's functioning around 4 axes: care and information to the patients; dispensing medicines and other authorized products; roles and services; necessary means for the pharmacy's functioning.

The new 2023-2027 framework agreement (negotiated by pharmacy unions and the National Health Insurance) creates a financial incentive for community pharmacists to participate in the DQO. In 2022, 75,61% of the 20,931 community pharmacies had completed the first step of engaging in that quality system.

The quality system aims to engage 100 % of community pharmacies. The second roadmap for 2023-2027 will continue the dynamic and support pharmacists in the effective deployment of this quality system within their pharmacy.

French Chamber of Pharmacists' medicines shortages monitoring system

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Between 2016 and 2021, reports of medicines shortage or risk of shortage have multiplied by 5 in France. Pharmacists are at the heart of shortages management through continuous reporting and information along the supply chain.

The purpose of this shortages monitoring system is to improve communication between supply chain actors to mitigate the impact of medicines shortages.

The shortages monitoring system allows pharmacists to report shortages to the operating pharmaceutical company either automatically via their dispensing software (in community pharmacies) or manually through the Internet (in hospital pharmacies). In return, the chief pharmaceutical officer of the operating pharma company provides them with information such as the planned return date, alternative medicines, etc. Wholesale pharmacists access this information as well. Dispensing pharmacists also notify when shortages end on their side (i.e. when they have been able to obtain at least partial supplies).

The system allows quantifying shortages (impacted therapeutic classes, shortage rate, shortage duration) thanks to an extensive coverage, and fosters communication with pharmacists at every step of the chain.

Between 500,000 and 800,000 shortage declarations are sent each month via the system. 93% of French community pharmacies, 85 subscribing pharmaceutical companies

(representing 84% of medicines dispensed in the community setting) and 10 subscribing wholesalers (representing 98% of the market) are connected. The French Chamber signed an agreement with the French Medicines Agency which will grant the latter direct access to the monitoring system's data.

Validation of a screening tool to identify people with difficulty swallowing solid oral medicines

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Background: Around 14.1% of Australian community pharmacy consumers report having trouble swallowing medications. (1) People who struggle with swallowing pills (tablets, capsules) may not necessarily have any problems swallowing food and drink. (1) Since most existing screening tools were developed for dysphagia, they may not be sensitive and specific enough to identify people who only have an aversion to swallowing pills. A screening tool, in the form of a dichotomous questionnaire, was developed that allows healthcare professionals to screen people who only struggle with swallowing pills.

Aim: To determine the reliability and validity of a newly developed screening tool in identifying people with pill-swallowing difficulties.

Method: A total of 30 participants completed the screening tool (index test) prior to undergoing their scheduled clinical bedside swallowing assessments (reference test) conducted by a speech pathologist. One point was allocated for each "yes" response in the index test. The outcomes of the index and reference tests for each participant were compared. Screening accuracy was determined by the area under the curve (AUC) of the receiver operating characteristic (ROC), and sensitivity and specificity values.

Results: The overall accuracy for this screening tool for identifying pill-swallowing difficulties was 87.6% ($p=0.001$) with a cut-off point of 4 (70.6% sensitivity and 84.6% specificity). This screening tool also showed an acceptable internal consistency with a Cronbach's alpha value of 0.754.

Conclusion: This newly validated screening tool may be useful for healthcare professionals, such as pharmacists, to identify people who only require a brief training on swallowing pills, and those who need a referral for a comprehensive examination into their swallowing functions. Further research will study the feasibility of this tool and the validity against a gold standard test e.g. videofluoroscopy.

An Australian perspective: The role of functional medicine and health coaching in community pharmacy practice

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Background: In 2023, the Australian government proposed expanding the scope of practice for pharmacists, but a Pharmacy Guild of Australia's publication identified a need for additional skills and knowledge. To address this gap, a pharmacy university curriculum is required.

Functional Medicine is a patient-centered approach to healthcare that aims to identify and address the underlying root causes of disease, as opposed to just treating symptoms. Within the scope of Functional Medicine, Health Coaches are trained to help patients adopt healthy lifestyle behaviors and support primary care providers in implementing therapeutic plans.

Dr. Abigail Linde, a functional medicine pharmacist and pharmacy owner, successfully implemented functional medicine in her pharmacy and is now helping 72 other pharmacies adopt similar services. In her 2019 "Functional Medicine Pharmacist Business Strategy" podcast, Dr. Linde shared her experiences, which can serve as a model for other pharmacists seeking to adopt Functional Medicine as an approach.

Adopting health coaching skills and a Functional Medicine approach may help to fill knowledge gaps for community pharmacists in Australia practicing to their full scope, particularly in the context of chronic illness. This could enable pharmacists to provide more comprehensive care to patients, extending beyond their traditional role of medication dispensing.

Purpose: To investigate how health coaching and understanding of functional medicine can advance pharmacy practice in Australia.

Method: Literature including concepts of "Pharmacy", "health coaching" and "functional medicine" was searched systematically and retrieved from English databases such as PubMed, Web of Science, Scopus, and ScienceDirect.

Interviews were also conducted with leading Functional Medicine Pharmacists such as Dr. Abigail Linde.

Results: The results mentioned are as follows:

- o A systemic review in 2021 of 330 studies showed improved clinical outcomes for health coaching in pharmacy practice.
- o A 2019 study identified coaching as a way to improve soft skills for pharmacists in an evolving scope of practice.
- o A 2019 study evaluated a pilot practice-based support package for pharmacy staff and found health coaching to be an effective method for delivering person-centered care.
- o A new model of pharmacist-patient care, called pharmacist-based health coaching, was developed with four pillars.

- o A 2019 retrospective cohort study with 9778 subjects showed conclusive results supporting the hypothesis that functional medicine-based care in a shared versus individual setting is associated with patient outcomes and costs for chronic conditions.
- o A 2020 retrospective study with 318 patients showed significant impact of functional medicine on patient-reported outcomes in inflammatory arthritis.
- o A 2016 pilot study conducted with Mayo Clinic practitioners and Kalish Institute confirmed the efficacy of functional medicine in treating fatigue, stress, and digestive disorders.

Conclusion: Incorporating health coaching and functional medicine principles can enhance the soft skills required for advanced pharmacy practice and improve medication management and patient health outcomes. This approach may be relevant in Australia, where pharmacists will practice to their full scope and require a diverse skill set to meet patient needs.

Empowering community pharmacists to prescribe preventative HIV medications in the Unites States of America

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Background: We are well into the fourth decade of the HIV epidemic, which has a significant negative impact on public health and the United States of America (US) and global healthcare system. A recent Center for Disease Control and Prevention report showed that 30,635 people were diagnosed with HIV in 2020 in the US. Pre-exposure prophylaxis (PrEP), a pill taken once daily, is 99% effective in reducing the risk of contracting HIV. Post-Exposure Prophylaxis (PEP) is a medication regimen that if initiated within 72 hours of exposure can prevent HIV transmission. However, the utilization of PrEP and PEP has been slow across the US and within the most high-risk populations.

In the US, a collaborative practice agreement (CPA) is a common mechanism for pharmacists to prescribe medications as a member of the healthcare team. Considering 9 in 10 Americans live within 5 miles of a community pharmacy, the pharmacist is a readily accessible healthcare provider that can serve as a critical intervention point for prescribing PrEP and/or PEP medications. Recently several US states have passed laws to specifically authorize pharmacists to prescribe PrEP and/or PEP utilizing a CPA or granting the pharmacist independent prescriptive authority.

Purpose: To compare and contrast US state laws authorizing pharmacists to prescribe PrEP and/or PEP.

Methods: An evaluation study design was used to identify states that authorize pharmacists to prescribe PrEP and/or PEP, either independently or under a CPA, utilizing literature search and state law reviews.

Results: In the last four years, 15 states passed laws authorizing pharmacists to prescribe PrEP and/or PEP. Of those 15 states, 9 provide pharmacists with independent prescriptive authority, and 6 states provide authority under a CPA. Additionally, there are several states that have pending legislation to advance pharmacist prescribing of PrEP and/or PEP.

Conclusions: The data highlights the rapid expansion of US states to mobilize community pharmacists to address the HIV epidemic with adoption of statutory authority in 30% of the states representing 127.8 million citizens or 35% of the total US population (September 2021).

Generic substitution—How to keep the good and positive dialogue.

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Background: In Denmark, is it compulsory to offer the customer the cheapest generic medicine, unless a note from the prescriber, "Ej S" (no substitution) is given. All prices on Px medicine in Denmark, is set, after a tender bid, by the authorities, and a new list is given every fortnight. A group of customers prefer to have the prescribed medicine, they are used to and prefer to pay the price difference. The reasons can be several, fear of change, trusting the prescriber rather than the pharmacy, package method, political etc.

Purpose: How can we keep the good dialogue, respecting the customers desires? How can we inform about alternatives if there is a price difference, or if we have a shortage? How can we optimize the use of time for the staff, preferring using time on a dialogue about effect, compliance, side effects, rather than using time on explaining that the substitute is just as good and safe.

Methods: By interviewing members of the staff from Aabenraa Loeve Apotek, both with a questionnaire and dialogue, have we mapped guidelines about the optimal way of serving the customer.

Results: With the use of computers, notes are taken, about the specific desires from each individual. If the wishes can not be granted, we make a standard procedure about either obtaining the product, having a dialogue about an alternative or send the customer to another pharmacy, that keeps the specific item in stock.

Conclusion: By using the standard we optimize work conditions for the staff, and also have more satisfied customers.

Reshaping clozapine supply: Pharmacist and consumer perspectives of a community-based clozapine dispensation service

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Background: Clozapine remains the gold standard therapy for treatment-resistant schizophrenia. Until 2015, clozapine dispensation was restricted to Australian hospital pharmacies resulting in a disconnect between hospital and community pharmacy care. Since then, transition to clozapine dispensation via community pharmacies has improved medication safety and monitoring. However, comprehensive evaluations considering both community pharmacists' and consumers' experience of this transition from hospital-based to community-based clozapine dispensation are scarce.

Purpose: To evaluate community pharmacists' and consumers' perspectives on the transition from hospital-based to community-based clozapine dispensation in a regional Australian health service.

Method: Community pharmacists completed a brief anonymous online survey, while consumers completed a paper-based survey to evaluate perspectives on transitioning from hospital-based to community-based clozapine dispensation across a regional health service in Queensland, Australia. To preserve anonymity of consumer responses, completed surveys were placed in an opaque envelope and handed to an independent staff member. In the absence of valid questionnaires, purpose-designed surveys were developed with consumer input. Surveys were administered from March to June 2022 and comprised of closed and open response questions. Pharmacists' surveys were analysed using descriptive statistics. Consumer surveys used both descriptive statistics and thematic analysis.

Results: Nine community pharmacists and seven consumers completed the surveys. Eight community pharmacists reported currently supplying clozapine – three each supplying 1-5 or 6-10 consumers (37% each); one supplying 10-15 consumers; and one >15 consumers. Pharmacists' results show communication with prescribers and supply arrangements to be the most important factors when establishing a clozapine supply service. Pharmacists who dispensed clozapine agreed or strongly agreed they were confident with meeting regulatory requirements (n=8, 100%) but only half (n=4, 50%) agreed they were confident in their staff knowledge of schizophrenia. Almost all pharmacists agreed or strongly agreed that having a community pharmacist supply clozapine created a sense of normality for consumers (n=7, 87.5%) but identified workloads (n=7, 87.5%) and supply of relevant documentation (n=2, 25%) as barriers to service provision. Overall, consumers expressed very high satisfaction with the community clozapine service

(n=6, 87.5%). Majority of consumers were confident in their community pharmacists' knowledge of clozapine interactions (n=6, 87.5%) and none were concerned about clozapine management at their community pharmacy of choice (n=0, 0%). Thematic analysis suggested consumers preferred the community-based dispensation service as it was "Good for independence" and they "Felt welcomed as part of community". Convenience was another factor for the high satisfaction rates with consumers finding the process "much easier" and "quicker than at the hospital pharmacy".

Conclusion: Community pharmacists and consumers expressed a high degree of satisfaction with the transition from hospital-based to community-based clozapine dispensation. The transition created a sense of normality and convenience for consumers, despite some barriers to service delivery. Collaboration with pharmacists and consumers to ensure clear communication and provision of relevant documentation are high priorities for successful transitions from hospital to community-based service. These results must be interpreted with caution due to the small sample sizes and further research is required.

A community pharmacy osteoporosis medication adherence intervention

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Background: Osteoporosis is undertreated despite effective pharmacotherapy due to poor patient persistence, adherence, and limited medication management services. Delayed administration or unintentional discontinuation of denosumab can result in rapid bone loss and spontaneous vertebral fractures. In Australia, 25% of the patients started on denosumab had ceased treatment after 5 years with 86% of these having no record of subsequent osteoporosis therapy. Historically, osteoporosis adherence interventions have had limited success. Effective interventions had the following characteristics: pharmacist intervention, dosage simplification, targeting specific reasons for non-adherence including addressing patient needs and concerns, action plans for GPs, patient involvement, counselling, and shared decision-making.

Purpose: To evaluate a medication management intervention for osteoporosis in Australian community pharmacies.

Method: Australian community pharmacists were trained to deliver an osteoporosis medication management intervention. The intervention was delivered to patients with diagnosed osteoporosis and taking prescription osteoporosis medicines. Dispensing records were collected for the 12 months prior to and 12 months after the intervention by the research team. Adherence was assessed by computing mean possession ratios and descriptively analysed via SPSS. Pharmacist competency in service delivery, pharmacists' and patients' perceptions of service,

patients' self-reported adherence, clinical interventions, and beliefs about their osteoporosis medications were also collected.

Results: 26 community pharmacies completed a total of 112 interventions over the trial period. Preliminary data is available to date for 23 patients. Initially, 10 of these patients were adherent to their osteoporosis medicines, 9 were not adherent and 4 had no baseline adherence data. 19 patients had available dispensing records after 12 months where 11 patients were adherent and 8 were not adherent. After 12 months: 5 of the 10 initially adherent patients were still adherent, 2 were no longer adherent, and 3 were lost to follow-up. 5 of the 9 initially non-adherent patients were still not adherent and 4 were now adherent. Of the patients without baseline adherence, 1 was now adherent, 2 were not adherent, and 1 was lost to follow-up. Reasons for loss to follow-up include 2 patients without a dispensing history available, 1 patient being advised to cease osteoporosis medicines, and 1 patient passing away. Using McNemar's Chi-Square test, there was no significant difference in adherence to osteoporosis medicines before and after the intervention (p=0.67).

Conclusion: To date, no significant improvement in osteoporosis adherence was found following the osteoporosis medication management intervention. Osteoporosis adherence measures are difficult to analyse for several reasons including patients visiting multiple pharmacies, an elderly cohort, participant drop out, heterogeneity in adherence measures for different medications, and long intervals between dispensing. Notably, this study only captures patients at the discontinuation phase, where some individuals may not even collect their first prescription. Addition of the data from the larger sample may have power to detect changes in adherence rates.

Non-medical prescribing in Australia

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Background: Non-medical prescribing has successfully taken root in some Organisation for Co-operation and Development (OECD) countries including Canada, England and New Zealand. Australia to date, allows a small proportion of non-medical health professionals such as dentists, nurse practitioners, optometrists and podiatrists to prescribe within scope.

In a post-Covid world, an opportunity exists for other health professionals to lighten the load of the medical workforce, regarding prescribing in certain circumstances. In specific Australian settings where timely access to healthcare is difficult to achieve, this is a particularly relevant concept. In Queensland, the Office of the Chief Allied Health Officer and Queensland Health have endorsed a tertiary Continuing

Professional Development (CPD) program at Queensland University of Technology, the Safe Prescribing and Quality Use of Medicines program, that aims to allow non-medical prescribing in certain circumstances.

Purpose: To explore the perspectives of health professionals enrolled in a non-medical prescribing training program regarding how it may influence their future scope of practice, at the commencement of the bespoke tertiary CPD program.

Methods: A pre-course evaluation was distributed via Qualtrix electronic survey with respondents invited to respond to free-text questions exploring their perspectives of changes to scope of practice that they hope to achieve from the program.

Results: 184 learners enrolled in the course (175 community pharmacists and 9 emergency department physiotherapists) and the survey response rate was high at 74.5% (137 respondents). Thematic analysis indicated that at course commencement, pharmacists were primarily concerned with the provision of quality patient care and enrolled in the program for the purpose of increasing timely access to medicines and primary healthcare for patients. They are keen to work within the expanded scope permitted, whilst predominantly seeking knowledge and confidence in terms of their learning and development via the CPD program. Another key theme of pharmacists' perspectives was the change in scope from being primarily administrative and/or retail, to becoming purposefully clinical, through advancing their practice and working to top of scope. Physiotherapists' perspectives demonstrated they are pursuing this safe prescribing training program for largely the same purpose as pharmacists – to increase access to timely patient health care by working to top of scope.

Conclusion: Overall, non-medical health professionals enrolled in a safe prescribing CPD program are keen to expand their scope of practice to include prescribing, primarily to further support patient care. Further research into how or if these learners' perspectives change as the program progresses, will be identified at the end of the program, as well as comparisons made with a second cohort in the near future.

Australian travellers' thoughts on using and paying for a travel medicine and vaccination service in community pharmacies

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Background: Australian community pharmacies are facing a challenging time due to hyper-competitive industry conditions and recent reforms to the Pharmaceutical Benefits Scheme (PBS) impacting revenue and profitability. Therefore, finding new revenue streams is more important

than ever for their survival. In Australia, pharmacists are already recognised as the most accessible health care professional and as skilled vaccinators. Community pharmacy is also, for many international travellers, the provider of their travel medicines and preventative travel health needs. The introduction of a user-pays community pharmacy travel medicines and health service that includes prescribing, provision, and administration of travel medicines has the potential to provide a revenue stream to increase profit and sustain the community pharmacy industry.

Purpose: This study explored international travellers' willingness to pay for, and influences on their usage of, a prospective patient-funded, pharmacist-led travel medicine and vaccination service in a community pharmacy setting.

Method: Travel agents throughout South-East Queensland were recruited to distribute an anonymous, online survey, to their clients. The survey was distributed by the recruited travel agency in the manner they thought was most appropriate for their business. Methods included placing signage in the store, email blasts, newsletters, and business social media pages. The survey utilised the Qualtrics platform. Participants were provided a detailed description of the service including the pharmacist's qualifications and then asked to consider if they would pay to use this service in community pharmacy (YES/NO). Participants were provided a text box to enter what would influence them to use/not use this service. Inductive thematic analysis of data was undertaken using Excel for the manual coding process. Codes, categories and themes were produced using an open and axial coding method as described by Saldana.

Results: Of the participants who completed the survey 89% were willing to use the described travel medicine and vaccination service in community pharmacy if it was provided by a pharmacist with extra training. The predominant themes identified were 'most accessible health professional', 'advanced scope of practice', 'value', 'process', 'patient beliefs about pharmacist scope of practice', and 'novel scope of practice'. These themes included some well understood advantages of community pharmacy such as 'most accessible health professional' and 'value'. However, this study also highlighted themes that as the role of the community pharmacist in Australia evolves, need consideration, in particular the theme 'patient beliefs about pharmacist scope of practice'.

Conclusion: This study demonstrates a willingness by Australians travelling overseas to use and pay for a travel medication and vaccination service within community pharmacies in Australia. Therefore, this is a potential new revenue stream for community pharmacies. Having this service provided in community pharmacy may also improve access to travel medicines for international travellers by providing a one stop shop for all their travel medicine needs. Future research would need to explore the development of essential training as well as the utility of implementation.

Assessment of users' perception of pain

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Purpose: To raise awareness about the relevance and impact of pain in the community served by the pharmacy, promoting an improvement in the quality of life of people with pain. To assess the impact that the pharmacist can have in pain management and monitoring.

Methods: The study took place during September 2021 and involved two interventions:

- Promoting health literacy and the journey of users with (chronic) Pain, acting to raise awareness of an earlier diagnosis and correct management and monitoring of Pain (dissemination of communication materials in the media);
- Implementation of a questionnaire aimed at obtaining the following information:

To assess the perception that users have of their pain; Ability to describe it; Perception of users towards health professionals and relatives when sharing their pain; Understanding and appreciation by health professionals and relatives of the pain shared by users.

Data were analysed using Excel®.

Results: Of the pharmacies involved, 100 involved 10506 people, of which 64% were female and 52% were aged between 45 and 75 years. Of the individuals assessed, 96% said they had already felt pain and 85% said they could describe pain. Regarding the degree of difficulty in describing pain, 29% of patients reported feeling great difficulty in describing it (Scale 4 and Scale 5) and 9% of patients reported that, when sharing their pain, they felt it was not understood or valued by both health professionals and relatives. The most relevant fears related to pain were the aggravation of pain (22%) and becoming dependent on third parties (8%). Of the assessed patients, 72% reported that the pharmaceutical follow-up and monitoring is important to correctly manage their disease, and of these, 44% reported that the most important pharmaceutical help is in the pharmacological and non-pharmacological advice provided on how to prevent, relieve or eliminate pain, as well as in the dispensation of medication.

Conclusions: Lack of knowledge and inadequate pain assessment hinder its correct control and prevention. The community pharmacist, due to his/her position and proximity to the community, becomes essential in the monitoring and correct management of pain.

Belgian community pharmacists compound tapering schemes for long term benzodiazepine users

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Background: The use of sleep medication (benzodiazepines and Z-drugs) in Belgium is one of the highest in Europe. About 1.1 million doses per day were dispensed in Belgian pharmacies in 2021, that's on average one dose for every 10 citizens. Long-term use of these medicines is associated with multiple side effects, such as increased sedation, fall risk, and an elevated risk of dependency and abuse. Avoiding initiation of treatment, or stopping treatment after a few weeks, is definitely the best-case scenario. But for patients that are already using benzodiazepines for more than 3 months (up to 20 years or more), a deprescribing approach should be deployed. Abrupt withdrawal, particularly if the individual has been taking the drug in high doses, can result in severe symptoms, including psychotic reactions. The recommendation is for slow withdrawal, tapering the dosage gradually over a period of several months.

Purpose: Pharmacy compounding of capsules has been a possibility for many years and allows to prepare and dispense individualized dosages to patients. Medical doctors have always had the possibility to prescribe dose reduction schemes for patients motivated to taper off. Unfortunately, as benzodiazepines are not reimbursed in Belgium, this came at a high cost for patients.

Method: In 2022, pharmacy associations together with health insurance funds and the National Institute for Health and Disability Insurance (NIHDI) worked on a reimbursement scheme that allowed tapering off benzodiazepines. The patient-GP-pharmacist triangle is at the core of the scheme:

- Pharmacists raise awareness when dispensing prescribed benzodiazepines and motivate patients to enter a withdrawal program
- General Practitioners (GP's) co-motivate patients to consider tapering off and they prescribe the programme.
- Patients engage in a tapering path and are intensively followed by the GP and the pharmacist

Once the program is initiated, pharmacists prepare and dispense individually dosed capsules. Apart from the compounding and dispensing of the capsules, pharmacists hold 2 counseling sessions, one at initiation and one as a follow-up interview.

Results: As from February 1st 2023, the new service was launched nationally, and extensive communication and information campaigns towards doctors, pharmacists and patients were organized. More than 1000 patients have initiated a tapering program by the end of April 2023, clearly indicating the societal benefit of the service. More than 50% of the patients opted for a 10-step reduction program, with each step taking 10, 20 or 30 days. Total duration of the tapering schemes varied between 50 and 360 days. The presentation in September 2023 will show more results in

terms of molecules in scope, dosages, and efficacy of the programs.

Conclusion: Pharmacists working with doctors in offering deprescription and tapering possibilities to long term benzodiazepine users, are a real step forward in developing the role of the community pharmacist. Critical success factors of these programs are: intrinsic motivation of the patient, therapeutic contract with 3 parties concerned, absence of financial penalty for patients, and smooth communication between prescriber and preparer/dispenser.

Health tour: Drug dispensation day

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Background: In 1985, the World Health Organization (WHO) defined the rational use of medicines to the extent that: "Patients receive the medication appropriate to their clinical needs, in the doses corresponding to their individual requirements, for an adequate period of time and at the lowest possible cost to them and to the community". The assistance work contributes resources to achieve the rational use of medicines, especially in communities with very low resources, and in this way, satisfy the health needs of the population. The health tour was organized by the civic club, Club Activo 20-30 Panamá Noreste in Las Cumbres, Corregimiento de Alcalde Díaz, District of Panama, Province of Panama on Sunday, September 18, 2022 (8:00 am- 2:00 pm), specifically at the Las Cumbres Community Board and was assisted by volunteers from the Faculty of Pharmacy (FF) of the University of Panama (UP) and the Alcalde Díaz Health Center of the Ministry of Health of Panama (MINSA).

Purpose: Offer comprehensive health care to the population, through the dispensing of medicines and pharmaceutical advice

Method: The health tour is a free service offered to low-income communities and basically upon arrival at the Las Cumbres Community Board, in the Pharmacy area, the activities carried out by the fourth-year students of the FF and supervised by Graduates in Pharmacy suitable of the UP and the MINSA., were the following:

1. Remove the medicines from the boxes in which they were transported
2. Sort and group medications
3. Separate expired and expiring medications from current medications
4. Preparation of numbers for adequate control at the time of receipt of the prescription and delivery of medications to patients
5. Receive Patients-Reception of prescriptions-Delivery of number to patients

6. Consultation and clarification of the information in the prescriptions (for the respective statistics: age, sex, whether it is insured or not, type of medication, etc.).

7. Interpretation of the prescription-Location of medications

8. Preparation and placement of the label with the instructions for specific use of the drug

9. Delivery and advice on the rational use of medicines to patients

The information obtained was placed in tables for further processing.

Results: Free pharmaceutical advice and medicines were provided to 214 patients (insured and uninsured population) who attended the pharmacy. Approximately 90 medical prescriptions were received. The medications dispensed were analgesics, antihypertensives, antiasthmatics, expectorants, lipid-lowering agents, antacids, antihistamines, antiinfectives, and vitamin supplements with iron.

Conclusion: It was very satisfying to participate in the health tour as an outreach, projection, and service activity towards the communities, allowing training and putting into practice the knowledge acquired by the students of the FF of the UP, as well as meet the health needs of the population.

Reforming the community pharmacy practices– A nationwide drive by all India organization of chemists & druggists in India

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Background: India is a sub Continent size having the largest population on earth, need a comprehensive policy of health care including other pathys and household medicines too. IPI has immerged as global supplier of Generic medicines, and has brought down health care cost burden substantially. Today household consumption of medicines is around 1.70 lacks crores, and equal value of Generic drugs are being exported as per standard quality norms of those countries.

Purpose: Chemists Associations (AIOCD) shifting focus on optimization of trading operations by it's members with Pharmacy professional tech & techniques ,keeping patients at centre.

When it's referred pharmaceutical industry, it's referred only Modern Medicine, Or Allopathic drugs & and formulations only. Instead of copying developed countries regulatory policies, India should have its own framework based on ground reality.

The effect of all these

Methods: A. There was a gap in education curriculum and practice of Pharmacy profession in India. So it be, force of consumers demand on more & more knowledge & information requirements at the time of dispensing of drugs, could not awaited for backend reforms to happen. Chemists Association exactly taken up this agenda of imparting

training to community pharmacists. B. At the same time a standard, we'll thought Chemists retail shop was designed, providing a space for patients counselling, reference literature, books , general diagnostic services etc .C.-In another supply channel front, Association supported for stockiest consolidation, by merging few distributors' firms, so as to invest in infrastructure like digitization, inventory optimization and readout benefits of scale & economy by which end consumer shall get direct benefit of consolidation.

Results: Results of all these activities of Association were very positive. Reforming pharmacy structure wise, knowledge wise, skills wise, digital tool wise was successfully started implementing state wise and targeted to expand nationwide.

To pee or not to pee: Cost-effectiveness analysis of alternative treatment options for uncomplicated urinary tract infections in women in Australia

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Background: Pharmacists can prescribe antibiotics to treat uncomplicated urinary tract infections in women in a number of countries including the United Kingdom, New Zealand, Canada and recently Australia (in the state of Queensland). This is consistent with allowing treatment of minor ailments by pharmacists and nurses, which is designed to increase access to care for patients and decrease doctor's workloads. However, peak doctor groups have raised concerns about the possibility of misdiagnosis and increased anti-microbial resistance due to inappropriate prescribing. There is currently limited evidence of the comparative cost-effectiveness from a third-party insurer perspective of pharmacists providing this service. Thus, additional evidence is required by policy makers in other jurisdictions in Australia who are considering policy change similar to Queensland.

Aim: To assess the relative cost-effectiveness of treatment options in primary care for women with a suspected uncomplicated urinary tract infection.

Methods: We use a decision analytic model incorporating three main treatment strategies: pharmacist led treatment, doctor-led treatment and "wait and watch". We assume the treatment protocol adopted in Queensland, Australia for the pharmacist-led arm. There are two treatment outcomes of interest, cost per symptom-free day and the number of cases of antimicrobial resistance, based on local resistance patterns. Data for treatment choices and outcomes for the pharmacist-led arm come from the key evaluation trial undertaken in Queensland, and for the doctor-led arm, come from general practice data. Sensitivity analyses are undertaken to explore the key drivers of model.

Results: Similar to previous studies, empiric treatment was found to be the least costly strategy available. However, results are sensitive to local antimicrobial resistance patterns as well as different prescribing patterns by doctors and pharmacists. The current gold-standard of mid-stream specimen of urine (MSU) testing is called into question given recent advancements in genomic analysis to detect uropathogens, such as rRNA gene sequencing.

Conclusions: Pharmacist-led treatment of uncomplicated urinary tract infections is a cost-effective strategy under a range of assumptions. Given the rise in antimicrobial resistance worldwide, regular audits of prescribing of antibiotics by all health professionals should be ongoing, alongside monitoring and reporting of drug resistance rates.

The evolving role of the community pharmacist in Belgium and how his remunerations adapts to those evolutions

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Background: In most countries, pharmacists remuneration is almost exclusively linked to the distribution and price of medicines. In Belgium, first steps were taken already in 2010 to dissociate pharmacists remuneration and medications' prices by introducing a unique dispensing fee for the pharmaceutical care provided by the pharmacist. During the last decade, also the principle of remuneration for 'advanced' pharmaceutical services was introduced in which there is no longer a direct link with the dispensing of a given medicine.

Purpose: The last years, the role of the pharmacist undergoes a continuous upgrade towards an essential partner in primary care next to other health care providers such as GP's, nurses, etc... . A further recognition of the pharmacist's role as health care provider in Belgium is desired by the sector and supported by the government and the payers. In this presentation we aim to investigate how the new role of the pharmacist is reflected in his remuneration by means of specific pharmaceutical care fees rewarding the pharmaceutical care acts performed. In addition, an overview is given on how also non-prescribed (and thus non-reimbursed) medicines and food supplements contribute to the daily economic reality of a community pharmacy in Belgium.

Method: Based on the use of different national databases, the remuneration and income of the pharmacist is followed over the years and a reflection is done on how the evolving role of the pharmacist corresponds to those evolutions.

Results: For the moment, In Belgium, specific pharmaceutical care fees no longer directly linked to the delivery of medicines and thus independent of medicines

volumes and prices, generate more than 10% of the pharmacist remuneration (reimbursed). The relative weight of those pharmaceutical care based fees continues to grow year by year. This is desired by both the pharmacist sector and the Belgian health care policymakers and payers. In addition, the latter evolutions generate a certain level of flat-rate remuneration and stabilization of the pharmacist remuneration, which is in terms of economical durability a plus given the political objective to further stabilize and even reduce medicines volumes dispensed in community pharmacies. Pharmaceutical care based remuneration fees can even contribute to this goal by stimulating pharmacist's rationalization or optimization actions (based on start-stop criteria). Simultaneously, the importance of non-reimbursed medicines and food supplements cannot be neglected. In total, the delivery of non-prescribed medicines generates 35% of the pharmacies turnover. However, in terms of pharmacies income, they represent almost 45%.

Conclusion: In Belgium, the importance of specific pharmaceutical care services and corresponding fees grows year by year in terms of pharmacies remuneration. A further evolution to stabilize pharmacies remuneration independent of medicines volumes and pricing and stimulate pharmaceutical care actions is demanded by the sector.

Consumer awareness of mental health support services, and perception of community pharmacists' role in mental health promotion

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Background: Mental health (MH) is one of Australia's national health priorities¹ with nearly half (45%) of adults likely to experience mental illness². However, mental illness is still frequently misunderstood. The capacity of community pharmacists to be more active in this domain through education and support of consumers has not been well explored.

Purpose: To explore Australian community pharmacy consumers' attitudes and beliefs regarding mental illness, knowledge of MH support services, and the role that community pharmacists could play in supporting people living with MH disorders and educating the community.

Method: This mixed methods study recruited a convenience sample of participants from six South Australian, five Victorian and four Queensland community pharmacies between June and September 2019. Customers aged 18 years or older and without prior or ongoing personal history of mental illness and/or with close family members with mental illness were invited to participate in this study. The

anonymous questionnaire comprised of 15 questions, separated into three sections: 1) demography, 2) MH (including attitudes/stigma, and MH supports) and, 3) MH resources (awareness of, and prior experience with, MH resources and role of community pharmacists in MH education).

Results: Of the 380 community pharmacy customers (SA=174, Vic=146 and Qld=60) who completed the questionnaire, there were slightly more females (57.4%; 218/380) with a mean age of 52.9 years (range 18-98 years). Half had completed high school (50.0%) with approximately one third having completed university (33.7%; 128/380). Most participants (70.3%; 267/380) believed that people with mental illness had a negative image mainly due to poor health literacy in the community. Three key themes: 'campaigns to promote awareness', 'education and training', and 'increased government funding for mental health support services' emerged as ways to improve awareness of mental illness in the community. Only 33.7% (128/380) and 63.7% (242/380) of participants were aware of Mental Health Week and the R U OK? Campaign, respectively. Only 12.4% (47/380) had participated in a MH campaign while only 3.4% (6/380) of participants were aware of any MH educational activities that community pharmacists were currently involved in. There were significant differences in responses between adults (<65 years) compared with older adults (≥65 years old) with the former reporting less negative image for mental illness ($p < 0.05$) and having more exposure to MH resources ($p < 0.001$) and more engagement with MH campaigns ($p < 0.01$).

Conclusion: Despite people being aware of various MH campaigns, they are less actively engaged. Age-based differences showed that older adults (≥ 65 years) have lower MH literacy and exposure to resources and campaigns. This is concerning as suicide is higher in older age groups in Australia. In addition to MH education and raising awareness of MH, pharmacists need to be included in MH campaigns to bring attention to their role as capable and accessible health care professionals.

Survey of how community pharmacies in urban areas deal with non-Japanese patients

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Background: In recent years, with the internationalization of society, community pharmacies have been required to pay attention to the language and culture of their patients. In Japan, the number of foreign visitors to Japan, which had plummeted due to COVID-19, is showing signs of revival. In general, Japanese pharmacies treat non-Japanese patients differently, and problems can arise when non-Japanese patients visit ill-equipped facilities. Therefore, solving the problems between non-Japanese patients and pharmacists

within pharmacies is an urgent issue. However, the actual situation of how each pharmacy in Japan deals with non-Japanese patients has yet to be discovered.

Purpose: This research aimed to understand the actual situation of dealing with non-Japanese patients in pharmacies to improve the problems between non-Japanese patients and pharmacy staff.

Method: In this study, a questionnaire survey was conducted among pharmacies belonging to two urban pharmacist associations in Japan (Hirakata City, Osaka Prefecture: Hirakata; Suma Ward, Kobe City, Hyogo Prefecture: Suma). The survey period was from September to October 2022, and responses were requested from each pharmacy unit. The main survey items are "frequency of contact with non-Japanese patients," "purpose of visit," "languages they have experience dealing with," "concerns about dealing with non-Japanese patients," and "pharmacy's ability to deal with non-Japanese (website, medical questionnaires, medicine bags, explanatory materials, pharmacists, staff). This study was approved by Nara Medical University Ethics Committee.

Results: The response rates were 30.9% (46/149) in Hirakata and 50.0% (29/58) in Suma. In both areas, about half of the pharmacies had contact with non-Japanese patients at least once a month (Hirakata: 47.8%, Suma: 55.2%). The non-Japanese visit to the store was to obtain prescriptions or over-the-counter drugs, and there were no health consultations. Some pharmacies experienced dealing with patients whose native language was not English, such as Chinese, Spanish, Korean, and Vietnamese. Many pharmacies in both regions were concerned about dealing with non-Japanese patients (Hirakata: 78.3%; Suma: 72.4%). There were insufficient non-English language websites, medicine bags, explanatory materials, and human resources in both the areas. In Hirakata, materials were more extensive than in Suma because the prefecture had previously distributed materials in languages other than Japanese.

Conclusion: Through this survey, both regions were found to need to be more responsive to non-Japanese, especially in languages other than English, which has emerged as an issue. As the number of non-Japanese whose native language is not English or Japanese is expected to increase, each region needs to improve its ability to respond to them.

Portuguese pharmacies white book – A reflexive exercise to drive the future strategy of community pharmacies and shape the patient journey within the healthcare ecosystem

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Background: In Portugal, all the various players in the health ecosystem have been making efforts to promote a universal, equitable, accessible health system with quality health care based on principles of social solidarity. Recent years have been increasingly challenging for the health sector, not only in trying to decrease existing access asymmetries but also in improving efficiency and expenditure control. There is a general recognition that the current health system, which has given rise to enormous social improvements in the past, will not be able to meet the needs of the future unless significant changes are made in healthcare delivery and organizational models. Today, community pharmacists contribute actively and sustainably to the health of the people and communities they serve. Their intervention is considered fundamental in strengthening health systems nationally.

Purpose: The National Association of Pharmacies (Portugal) identified the need to develop the White Paper of Portuguese Pharmacies to consolidate a contemporary vision for the pharmacy sector in Portugal as a guiding tool that establishes future strategies and positioning. This White Paper aims to establish a broad consensus about the future of Portuguese Pharmacies, based on the motivation for the continuous transformation of the sector and on the resilience of the professionals that integrate it, to overcome the challenges ahead.

Methods: The process started with the direct involvement of 341 teams of pharmacies (distributed by participating in various workshops held at the national level), employees (405) and representatives of different national and international entities and stakeholders in the sector (30), which resulted in recommendations and ideas. During the consultation period, more than 2000 contributions were collected to draft the conclusions. After assessing the feedback from the consultation and consensus was established 56 priority areas of development and action proposals. To allow a comprehensive analysis, these priorities were divided into three dimensions and six development axes.

Results: The preliminary results show that the future positioning of community pharmacies in Portugal will be led in the following three dimensions: I. Transformation of individual health journey; II. Building professional and

technological capacity as a catalyst for change; III. Knowledge and regulation at the service of society. The development axes are: 1. Affirmation of pharmacy as a space for health and wellness in individual health journey; 2. Digital transformation serving pharmacy and people; 3. Generation of scientific-professional evidence in health; 4. Valuing teams and the profession; 5. Promotion of territorial cohesion as a response to social determinants and health; 6. Promotion of economic and financial sustainability.

Conclusions: The process of developing the White Paper was based on assumptions of collaboration, transparency, and engagement in a transversal way to the health ecosystem, aiming to understand the ideas of different stakeholders and based on experience and expertise from around the world. The preliminary conclusions were first presented at the 14th National Congress of Pharmacies.

Keywords: pharmacy; strategy; healthcare; patient journey; health system

A qualitative study exploring factors that affect pharmacists' involvement in asthma care services in Kuwait

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Background: Asthma is a respiratory disease caused by chronic airway inflammation in the lungs that constricts the airway and increases mucus production (WHO, 2020). Asthma is considered the most common chronic disease of people living in Kuwait (Abul et al., 2001). Pharmacists can play key roles to support health outcomes for patients with asthma.

Purpose: The aim of this study is to identify factors that influence the involvement of pharmacists in asthma management in primary care centers in Kuwait.

Method: Pharmacists were recruited via convenience sampling and passive snowballing techniques. Qualitative, online semi-structured, interviews were conducted via Zoom. The topic guide consisted of several sections that included demographic characteristics, pharmacists' role in asthma management, significant barriers for pharmacists to provide optimal asthma services and relationship and collaboration with other healthcare professionals. Recorded interviews were transcribed verbatim and analysed utilizing NVivo® 11 software. Data were inductively analysed to identify themes using the Braun and Clarke framework. Ethical approval was obtained from Newcastle University and Ministry of Health, Kuwait.

Results: Fifteen interviews with pharmacists were conducted. The sample consisted of more females (n=13)

than males (n=2). Most pharmacists had working experience of five-ten years as pharmacists in primary care centres (n=9). Also, most of them worked in primary care centres located in Al-Asema (the capital) district (n=7). Two main analytical themes identified related to the role of pharmacists in asthma management. First theme identified was professional identity which influenced by pharmacists' knowledge, patients' and physicians' trust and hierarchy in health system. Participants appeared to have different level of knowledge about asthma medications and guidelines, and this create different professionals' identities that may affect their involvement in providing information and exercising some judgments. Lack of trust from both physicians and patients might prevent participants from providing asthma services. Also, pharmacists seeing themselves less significant than physicians might discourage them to share their ideas and collaborate with physicians. Second theme emerged from the data was expectations. Patients' expectations appeared to influence the services provided by pharmacists in asthma care. If patients only want to dispense their medication, the pharmacists will act as dispensers only and if they expect more from them, they will provide more services. Also, participants appeared to behave according to their expectations based on uncertainty created by existing legal and regulatory frameworks, as working outside of these was beyond expectations.

Conclusion: Both professional identity and expectations seem to impact the role of pharmacists in asthma management in Kuwait. Pharmacists in Kuwait may have different identities affected by their knowledge, trust from patients and physicians and hierarchy in health system. Also, pharmacists' expectations acquired from their past experiences with patients or due to uncertainty of the laws and regulations in Kuwait have a negative influence on their engagement of asthma services. A limitation of this study is that pharmacists were mostly from the capital so findings may not be applicable to the whole of Kuwait.

Expanding pharmacists' scope of practice: Lessons from the outback

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Background: Internationally pharmacists are working in expanded roles to provide services including immunisations, screening and management of chronic and infectious diseases, health promotion, prescribing, ordering imaging and pathology, within collaborative models of care. However, in Australia, pharmacist roles are predominately focused on medication supply. Rural community pharmacists are highly skilled and knowledgeable integral members of the healthcare team, who provide accessible medication supply and health advice to seven million people who call rural and remote regions home. Despite the unique healthcare opportunity rural pharmacists provide, there are no structured models to support them to provide expanded

services to improve health outcomes in their communities. To address this a community-pharmacy-based health service model was designed and developed to provide an accessible ear care service (LISTEN UP – Locally Integrated Screening and Testing Ear aNd aUral Program).

Aim: To explore consumer, pharmacist, and health professional perspectives of the implementation of LISTEN UP in the context of a remote community setting.

Results: Ninety percent (50/55) of the consumers were highly satisfied with the service and would recommend the service to others. 'Blocked ear' and 'ear pain' were the most commonly reported complaints. Pharmacists recommended over-the-counter products to two-thirds of the participants and referred one quarter to a GP. All consumers in the study described the service positively with reference made to convenience, improved confidence and appreciation of the knowledge gained about their ear complaint. Pharmacists reported motivation to upskill and manage workflow to incorporate the expanded service and expected both consumers and GPs to be more accepting of future expanded services because of the LISTEN UP trial. It was highlighted however that without funding to provide the service, other pharmacy tasks would take priority over providing an expanded service such as LISTEN UP.

Conclusions/recommendations: Examination of consumer, pharmacist, and health professional perspectives of the implementation of the LISTEN UP service has highlighted important lessons, which can be applied to future expanded pharmacy practice design and development. Training, funding, and collaboration have been recognised as essential for successful program delivery. Expanded practice for rural community pharmacy is a strategy that may reduce the barriers to accessing primary healthcare for rural and remote Australians.

Investigating the role of pharmacists in nutrition counselling

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Background: One of the key roles of pharmacists around the world is health promotion, which includes education of patients on life-style factors associated with non-communicable diseases. Poor nutrition has been recognized by the World Health Organisation as an important factor that contributes to the development and exacerbation of chronic conditions such as cardiovascular disease and diabetes. There is limited literature available on the role of pharmacists in this area of patient education and counselling. Our research is aimed at investigating the role that pharmacists play in the counselling of their patients on general nutrition.

Methods: An online survey was designed and aimed to investigate attitudes towards and confidence in nutrition counselling, including specific disease topics. The study design specifically separated questions into dietary advice vs advice on vitamin and mineral supplements. Participants for the first phase of this research were pharmacy students in their final year of training as well as pharmacy graduates in their intern year. Phase 2 of this research, aiming to expand the participant population to community and hospital pharmacists with many years of work experience, is currently being undertaken.

Results: Participants (n=66) reported a positive attitude towards a role for pharmacists in the provision of general dietary advice to their patients. Half of all participants reported that they already provided dietary advice to patients on average once per day to once per week while working in a pharmacy or on placement. More than half of all participants indicated that patients sought dietary advice for chronic disease areas including type 2 diabetes, hyperlipidaemia, hypertension, weight management as well as gastrointestinal reflux and constipation. Participants reported various levels of confidence in providing dietary advice depending upon disease areas.

Conclusions: Pharmacists displayed a positive view towards playing an active role in providing nutrition education to their patients in addition to medication management for chronic health conditions. Further work is needed to elucidate whether pharmacy educational programs currently provide adequate training in general nutrition in the disease areas where pharmacists most often are required to provide dietary advice.

Attitude and exposure of community pharmacists' to drug promotion in Pakistan: A cross-sectional study

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Background: Drug promotion a factor leading to irrational use of drugs and may negatively influences the dispensing pattern of medicines including antibiotics.

Objective: So we measured views about accepting gifts and influence towards drug promotion among community pharmacists in Pakistan.

Method: Adopting a pre used questionnaire, we conducted a cross-sectional multiple-site survey study. We took data from community pharmacies to investigate the skepticism, exposure and acceptance to drug promotion and had been taught about dealing with medical representatives. Data were analyzed in simple descriptive statistics, and the χ^2 test was used to evaluate association with demographics. All the data were analyzed using SPSS V.23.0.

Results: A total 463/533 (86.9%) pharmacists completed the survey. One fourth of Pharmacists reported being taught

about the ethics of drug promotion (26.8%) were significantly associated with higher age (age 31%–35 years, 81.9%; $p < 0.05$). More than two-thirds (73.4%) of the pharmacist found it appropriate to accept stationery and textbooks (70.6%) as gifts, and only few (17.5%) felt it appropriate to accept direct money. Less than half of the pharmacists (47.3%) perceived drug companies were useful for gaining knowledge about new drugs. Majority (76.2%) thought these drug promotions play a role in the irrational prescribing.

Conclusion: Large proportion of pharmacists participating in the study felt it was appropriate to receive small value gifts from pharmaceutical companies. Also, a small proportion of the respondents were given ethical training and education about drug promotion. Altering the contents of syllabus and updating the pharmacist's knowledge after graduation, as part of continued pharmacy education, will eventually improve the healthcare professionals' capability to act for the patients' welfare

Study on the support of smoking cessation at community pharmacies in Taiwan

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Objective: This study aims to understand the marginal benefits brought by the implementation of the "Smoking Cessation Service Plan" through literature comparison and statistical analysis of the changes in the business data of relevant community pharmacies in different years.

Background: Since the National Health Department of the Ministry of Health and Welfare promoted the smoking cessation service plan in 2012, a total of 786 community pharmacies have provided this service, but there is no relevant research report on the effectiveness of this program in China.

Method: To analyze the statistical analysis of the pharmaceutical service fees, the increase in the number of patients, the increase in sales turnover, the increase in prescription dispensing, the number of outpatient prescriptions, and smoking cessation related lectures of community pharmacies participating in the "Smoking Cessation Service Plan" between 2012 and 2023, and the changes in social marginal benefits brought about by the implementation of the Plan.

Results: The results of this study show that after the implementation of the "Smoking Cessation Service Plan", the marginal benefits of the society have increased significantly, which has improved the business revenue of community pharmacies and the self-reputation of professional pharmacists, and can effectively achieve the social responsibility of community pharmacists.

Discussion: It is hoped that through the analysis of the effectiveness of the "Smoking Cessation Service Plan" in this study, more professional pharmacists will be encouraged to participate in promoting the "Smoking Cessation Service Plan".

Funding community pharmacy dispensing: A qualitative evaluation of an existing fee-for-service model and assessment of an potential performance-based model, resulting in a proposed quality-focused funding framework.

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Background: Healthcare funding reform supports value-based payment models, however community pharmacies in most countries are remunerated for dispensing on a product-linked, fee-for-service (FFS) basis.

Objective: To assess the impact on pharmacists' practice of FFS dispensing payment and determine whether a Performance-Based Pharmacy Payment Model (PBPPM) may be an appropriate alternative.

Methods: Informed by two adaptation frameworks, the study used thematic analysis of interviews with key community pharmacy stakeholders to (a) evaluate the Australian FFS dispensing model, (b) determine the fit of a PBPPM in an Australian context, and (c) assess the feasibility of using a PBPPM in Australia. Inductive reasoning was applied to develop a quality-focused funding framework.

Results: FFS funding is perverse as it encourages pharmacists to dispense quickly rather than commit time and apply expertise to improve outcomes in accordance with each patient's requirements. Dispensing payments should be stratified based on patient and medication risk factors. Payment for commercial aspects of dispensing should be separate to those for professional aspects. Supplementary payments should support processes that are known to enhance the quality of care.

Conclusions: The current funding model is not appropriate for either patients or the profession. A funding framework that supports greater delivery of services focused on quality is proposed. Payment adjustments linked to performance outcomes should not be included until outcome measures with strong specificity and correlation to pharmacists' services are developed.

Upgradation of knowledge, standards for value addition skills at Community Pharmacy- An Indian Perspective

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Background:

- Status of Community Pharmacy in India (Maharashtra-Marathwada Zone)
- Community Pharmacies in Maharashtra were regulated by the Maharashtra State Pharmacy Council which is responsible for issuing and renewing licenses for pharmacists and pharmacy establishments.
- Community pharmacies were required to follow the rules and regulations set by the PCI and the D&C Act
- In Maharashtra, Several CP'S got training under CEP which was run jointly by MSPC and MSCDA
- However, the Govt and healthcare authorities were taking steps to ensure the availability of essential medicines.

Expectation of Common People from Community Pharmacy & Pharmacists

- Dispensing of medications
- Availability of medications
- Patient
- Health advice
- Professional conduct

Reciprocation by community pharmacists

- Dispensing of medications
- Availability of medications
- Patient
- Health advice
- Professional conduct

Objectives: To evaluate need of upgradation of knowledge, standards for value addition skills in Community Pharmacy in Maharashtra. Hypothesis-Community Pharmacists need to be upgraded in terms of Pharmaceutical Care Knowledge & value addition skills.

Method: Study design- Sample size 250 Community Pharmacists

- Prepared a questionnaire of 20 Questions related to objective.
 - Feedback from 250 Community Pharmacists collected by 25 volunteers.
1. Data Collection & Analysis.
 - Data collected via google form and compiled in the google drive.
 - Data Analyst involved for evaluation of collected data.
 - Segregated data further analyzed by the team experts of the Community Pharmacy wing of IPA.

Results:

- 93% of Community Pharmacists wants to upgrade themselves in terms of skills and knowledge, majority of them are needed soft skill training on technology.
- 7% of Community Pharmacists are regularly updating themselves related to new things in the market.
- 70% of Community Pharmacists knows the sources from where they could upgrade themselves. 22% doesn't know about it & rest did not answer.
- After analysis we could find out that there is inconsistency in upgradation program for the Community Pharmacists

Significance

Need of Upgradation has been significantly found to be essential for all community pharmacies across the zone. As status of the regular updation in the knowledge and skills is worrisome, we should take immediate steps to make pharmacists habitual of getting updated.

In the changing era of the competition, technology plays a key role while practicing in the community pharmacy. Across the globe many bigger organizations are now stakeholders, while competing with them with respect to services from community pharmacy, we should be upgraded at par.

Conclusion: In the comparative study to analyse the need of upgradation of knowledge, standards for value addition skills in community pharmacy found to be positive.

As per most of the pharmacist's desire to upgrade themselves and are seeking for sources.

It is important that government authorities should initiate the compulsive training programs for the pharmacists working in Community Pharmacy.

Initializing patient-centered care services at community pharmacy-sharing of experience by Indian community pharmacist

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Background: Over 5.8 million Indians lose their lives each year to NCDs.WHO is projecting that NCDs will account for nearly 75% of all deaths in India by 2030.Pharmacist plays an important role in combatting NCDs in developed countries.

Purpose: To utilize potential of pharmacist by initializing Patient-centered care services like screening and monitoring of patients with hypertension, diabetes, respiratory disease and obesity and counseling them.

Methods: A) Screening and monitoring programs for regular prescription refilling patients (N=110) were conducted at Yashashri Pharmacy, Kalyan in Thane district of Maharashtra. Patients were screened for blood pressure (BP), blood sugar level (BSL), glycosylated hemoglobin (HbA1c), Peak Expiratory Flow Rate (PFER) and Body Mass Index (BMI). Health record card was created for individual patient mentioning demographic details, illness, medications and clinical measurements.

B) Patient counseling on medication adherence: Patients (N=110) were informed about direction of use, advice on side effects, precautions, and storage conditions, diet and life style modifications. Each patient was informed orally regarding for treatment adherence, Patient Information Leaflet of NCDs was handed over and advised for follow-up at physician.

Results: 88 patients visited pharmacy regularly for screening of individual parameters. It resulted in improved medication adherence and improved patient outcomes. The patient-centered care services were well-received by these patients.

Conclusion: The pharmacist intervention in close cooperation with other healthcare professionals, deliver value to patients and contribute to making health delivery systems more efficient. There is immense need to utilize pharmacist's potential in India.

Community pharmacists as antimicrobial gatekeepers and guardians: Exploring the views of pharmacy professional organisations and consumers

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Background: Primary health care is often the public's first touchpoint with the health care system. Globally, the community pharmacy sector has progressively expanded its contribution to primary health care delivery, which includes supporting collective and collaborative antimicrobial stewardship (AMS) efforts. However, community pharmacy continues to be an underutilised resource in AMS, despite consistent promotion by the sector's policy, academic and professional spheres of the profession's potential and contribution. Consumer knowledge about the role of community pharmacists has been shown to influence expectations of what health services the profession can and should provide. However, there is limited understanding of consumers' perceptions of community pharmacists' promoted and actual roles in AMS.

Purpose: To examine how pharmacy's role in AMS is expressed in pharmacy professional organisations' position statements and how this messaging aligns with consumers' perceptions and expectations.

Methods: Descriptive analysis of publicly available AMR position statements from available websites of all International Pharmaceutical Federation (FIP) member organisations supplemented by a general engine search sourced between February 2021 and May 2021 was undertaken. Four key themes were explored: (1) rationale for pharmacists' involvement in AMS; (2) characterisation of pharmacists' AMS role; (3) perceived impact of pharmacists' involvement in AMS; and (4) perceived enablers and/or barriers to AMS involvement. In addition, an online survey of

Australian adults was conducted in November 2022 to understand consumers' experience of seeking information from and engaging with community pharmacists on using antimicrobials based on a hypothetical cold and flu enquiry.

Results: Analysis of the 17 position statements sourced revealed that professional organisations focus on characterising pharmacists as advisors and educators as their primary role in AMS. Specialist knowledge in medicines and accessibility as a health service, including the delivery of professional services such as immunisation to reduce AMR were highlighted as supporting rationale. The consumer survey findings revealed that pharmacists are regarded as key sources for antibiotic related information, and that expectations on what information will be provided being broadly met. Over 50% of respondents indicated alignment between the best practice example of a pharmacist providing cold and flu management advice with their own experience, suggesting that the value of pharmacists' ability to triage is aligned with the messaging promoted by professional organisations. However, seeking pharmacists' advice on minor ailments did not appear at the forefront of options considered, with 17% of respondents indicating seeking doctor's advice when considering cold and flu management options compared to 10% seeking pharmacist's advice.

Conclusion: Community pharmacists are regarded by the public as key information brokers when sourcing antibiotic related information – reflecting their positioning as advisors and educators. However, a narrow public appreciation of the breadth of pharmacists' skills and professional services offerings may exist. Better visibility of community pharmacists in managing minor ailments in primary care and explicit linkage of vaccination services as an AMS strategy are needed to better support optimal antimicrobial use.

Antibiotics ease of access for children at drugstores in Lahore, Pakistan- A mixed method study

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Introduction: Antibiotics overuse is a major health threat globally and is intensifying the antimicrobial resistance levels. Antibiotic consumption is higher in children as compared to adults which is a matter of great concern in low and middle countries like Pakistan where despite the presence of strict regulations, the antibiotics are easily and commonly available without consultation and prescription. People often resort to drugstores to resolve the acute pediatric infections and this unchecked misuse is proving to be a silent killer with the passage of time.

Methods: A mixed method survey was conducted at drugstores in Lahore, Pakistan, involving antibiotics demand from drugstore staff through the direct product request

method in the quantitative phase. The antibiotics were demanded by generic names for children aged below five years age to explore nonprescription sales at visited drugstores. In the qualitative phase, the community pharmacists with ample prior experience were engaged in face-to-face interviews to explore the main reasons for the nonprescription dispensing of antibiotics.

Results: Overall, the antibiotics were dispensed at more than 95% of drugstores. Metronidazole, co-amoxiclav, and clarithromycin were dispensed during all visits. Significant differences were observed in dispensing practices between administrative towns, drugstore categories, type of antibiotic demanded, and presence of qualified pharmacists (p-values <0.05). The majority of interviewed community pharmacists highlighted that they avoid dispensing antibiotics in mild infections, however, due to parents' pressure, weak regulations, and the tendency to increase sales triggered irrational practices.

Conclusion: The dispensing of demanded antibiotics by direct product request was quite high. The dispensing differed for the type of antibiotic demanded, geographical area, drugstore category, and presence of a pharmacist. The parents' pressure, business interests, and weak regulations were the driving factors for high rates of dispensing.

Minor ailment service through nodofarma asistencial: The tool for the registration of healthcare services in Spain

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Introduction: The General Pharmaceutical Council of Spain, promote the Clinical Professional Pharmacy Services (or SPFA, to use its Spanish acronym) through the registration tool Nodofarma Asistencial (N DFA). The Minor Ailment Service is provided when a patient or caregiver comes to the community pharmacy asking for the most appropriate remedy for a specific health problem, and the pharmacist will advise the patient of the most appropriate solution, taking into account a series of considerations.

Aim: To facilitate the registration of the Minor Ailment Service in a simple and authenticated way and to demonstrate the healthcare work of the community pharmacist.

Material and methods: Digital tool that contains the procedure for the Minor Ailment Service and has referral criteria for 33 minor health problems such as cough, constipation and diarrhoea, among others. In addition, it provides pathology-based patient medicinal products recommendations through integration with the medicines

database, Bot PLUS, physician referral reports and patient materials.

Results: As of 25/04/2023, Minor Ailment Service was offered 10,210 times by 506 pharmacies.

The average patient was female (65.6%) aged 30-69 years (65.40%), followed by those over 70 years (15.27%).

3,377 (33.14%) of the patients had a chronic disease and 3,451 (33.80%) were taking some kind of pharmacological treatment for them.

A total of 11,163 reasons for consultation (1.09 reasons/advice) were recorded, the six main ones being: constipation (5.86%), insomnia (4.23%), dry cough (3.85%), productive cough (3.49%), nasal congestion (3.42%) and diarrhoea (3.34%).

On 452 occasions where Minor Ailment Service was given (4.43% of the total), 547 incidents were detected (1.21 incidents/Service), with the Medication Related Problems with a high probability of adverse effects being the most identified, present in 62.4% of the incidents. The most common Negative Medication Outcomes is non-quantitative medication insecurity, present in 54.90% of the incidents. 378 of them had already caused disruption to the patient's health. In 194 incidents (35.4%) a referral to a doctor was made, 210 (38.4%) information on the medicine was provided and 42 (7.67%) health education was provided by the pharmacist.

The pharmaceutical actions were: advise on pharmacological treatment (50.90%), advise on non-pharmacological treatment (48.61%), advise on hygienic-sanitary measures (44.17%), doctor referrals (8.47%), refer to another health professional (15.1%) and refer to another SPFA (0.39%). In only 375 of these cases did the pharmacist have to refer without being able to intervene.

The most commonly prescribed medicines were: paracetamol in combination with other medicinal products (346), ibuprofen (283), paracetamol (253) and dextromethorphan (210).

Conclusions: NDFA facilitates the practical implementation and recording of the pharmaceutical care of the Minor Ailment Service. Pharmacists were involved in this pharmaceutical advice on 9,835 occasions (96.3% of the total). The register has facilitated the identification of incidents involving patients' medication, with the pharmacist being able to intervene in 43.07% of them and referring 35.4%, thus favouring a multidisciplinary approach to the patient.

Online self-assessment to verify compliance with regulatory requirements, good pharmaceutical practices and quality in health care

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Background: In January 2023, an optional and confidential online self-assessment form was sent to community pharmacies in the province of Jujuy, Argentina, in order to assess the quality of the pharmaceutical activity and compliance with regulations. When completing the form, the pharmacist visualizes which are the correct answer options and their normative justification.

Purpose: Analyze the data obtained from the self-assessments received and plan transformation actions to improve the quality of pharmaceutical services.

Method: It was used an online form with multiple options and alternative responses, which scores compliance with the requirements. The responses received were analysed by detected non-compliance, the type of pharmaceutical service offered by the pharmacy, and possible actions suggested to promote the transformation.

Results: Responses were received from 67.6% (123) of the pharmacies. The responses indicated, in relation to the provision of pharmaceutical services, that 5.7% of pharmacies make compounds, 12.4% carry out pharmacotherapeutic monitoring of chronic patients, 45.5% have check points to prevent the occurrence of errors, 72.7% check the origin of the products, 50.4% participate in disease prevention or health promotion programs, 12.4% participate in pharmacovigilance programs and 19.8% do not perform any of the services or activities described.

Out of a total of thirty (30) scores of compliance with the quality of care requirements, current regulations, good practices in pharmacy and the provision of pharmaceutical services, 0% of the pharmacies (0-10) points were classified with a very poor result, bad 1.6% (11-15), regular 31.7% (16-20), good 53.7% (21-25) and very good 13% (26-30). The rating does not contemplate the severity of the lack or deficiency in the quality of care, however, it guides the pharmacist to detect non-compliance with current regulations and the need to adapt the quality of the services given by their pharmacy to the requirements.

Conclusion: Once the responses were analyzed, the control area of the Ministry of Health and the Jujuy Pharmaceutical College planned joint actions with the objective of training on good cold chain practices, safe disposal of hazardous waste and actions to reduce antimicrobial resistance and other items on the form that were detected with high non-compliant.

Hepatitis B virus awareness and vaccination using implementation strategies in rural communities outreaches

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Background: Hepatitis B is a global health issue, responsible for causing a large number of deaths each year. In Africa, over 90 million people are affected by hepatitis B, making it a significant public health challenge. In Nigeria, more than 20 million people are living with hepatitis B, and the majority are unaware of their status due to poor healthcare access and awareness in rural communities. These communities are at a higher risk of contracting the virus, as they have lower screening rates and vaccination coverage.

Purpose and Methods: The aim of this study was to improve the reach and effectiveness of hepatitis B screening and vaccination programs in Nigeria's rural communities by using community outreaches. Our objectives were to develop educational resources, workshops, and counseling units, develop implementation strategies with stakeholders, and conduct follow-up surveys to track progress. We monitored the program's effectiveness by analyzing reported cases of hepatitis B before and after the intervention and conducting surveys among vaccinated individuals and stakeholders.

Results: Our survey results showed a significant reduction in reported cases of hepatitis B in the targeted communities, increased awareness of the disease, and higher willingness to get vaccinated. These findings suggest that the community outreaches were effective in improving screening and vaccination rates for hepatitis B in rural Nigeria.

Conclusion: Our study highlights the importance of targeted community-based interventions to address healthcare disparities and improve the reach of hepatitis B programs in rural communities. The success of this program provides a foundation for future cluster-randomized trials that can be implemented in multiple community pharmacies to further increase access to screening and vaccination services.

Pharmacists role in suicide prevention: Advanced suicide prevention training and staged supply of medication

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Background: Suicide prevention is a priority for the community and the government, yet suicide rates have not significantly reduced over the past decade. We urgently need a fresh approach to tackle this persistent issue. Staged Supply of Medication is an existing service employed by medication prescribers (e.g., General Practitioners, Psychiatrists) to reduce harms caused by misuse of medications. The service involves prescribing and dispensing medications in instalments. Given that self-poisoning is the most widely used method for suicide attempts and significantly increases risk for subsequent suicide attempts, Staged Supply is a promising approach. Staged Supply services could be leveraged as it is powerful combination of means restriction and psychosocial support, through the frequent contact recipients have with pharmacists. Interventions targeting healthcare professionals historically focussed on stigma reduction and referrals. Recently, focus has shifted to the importance of more immediate social interactions with at-risk individuals, given the lag between referral to services is putting patients at risk. There is a window of opportunity to mitigate suicide risk, and upskilling pharmacists in suicide prevention, given their optimum position to have conversations with patients about how they are feeling and to share information about available supports, is promising.

Purpose: This project harnessed the relationship and frequent contact pharmacists have with at risk patients, incorporating provision of evidence-based suicide prevention training and the development and testing of materials to improve the Staged Supply of medication interactions.

Method: The advanced training was delivered to Pharmacists in Tasmania across two pilots (n=34), modified after feedback, then delivered to Pharmacists (n=116). The follow-up skills-build training session was piloted with six pharmacists. The effectiveness of the training was measured by pre- and post- and six-month follow-up surveys. To complement the training, the experiences and opinions of Tasmanian Pharmacists on Staged Supply of Medication were investigated by (a) an online survey (n=62) and (b) semi-structured interviews (n=7). Furthermore, two online participatory co-design workshops with pharmacists (n=6) and people with lived experience (n=1) were conducted using design thinking principles to develop an intervention to improve the Staged Supply process for suicide prevention. The acceptability, feasibility and appropriateness of the

intervention were assessed in a 3-month pilot with six pharmacies.

Results: Suicide prevention training appears effective at improving pharmacists' knowledge, confidence, and self-efficacy to engage in suicide prevention actions. There were reductions in attitudes, feasibility, appropriateness, and supportiveness at follow-up that may reflect in-practice. For Staged Supply, a conversation flow-chart and a patient agreement form were co-developed to assist pharmacists with the language to speak with patients, their duty of care and in providing continuity of care. The intervention materials were perceived as being acceptable and appropriate by the participating Pharmacists, however they struggled to implement them into practice.

Conclusion: Pharmacists are involved in suicide prevention and specialised training and resources to assist are needed. Staged supply is one service that may be optimised for patients at risk of suicide. However, multi-level strategies to enable Pharmacists to effectively engage in suicide prevention require further investigation.

CPS-097

Investigation of patients' mood on their distance from the pharmacist during medication instruction

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Background: Pharmacists must adjust their distance from patients to facilitate communication during interviews and gain their trust. The distance between the patients and the pharmacists varies depending on many factors, such as gender, posture and the patients' mood. Only a few of these papers have actually measured and validated distance with patients. In this study, we validated our method of assessing mood and measuring distance before beginning a survey with patients.

Methods: Five pharmacists and 33 subjects participated in the study. The Japanese version of the Brief Mood Questionnaire Checklists (BMC-J) was used to quantify the subject's mood for the day, and then the distance from the pharmacist that the subjects considered comfortable was measured at the bedside. The relationship between the mood and distance obtained was examined.

Results: The comfortable distance of subjects was influenced by gender, posture, and mood. The shortest distance was 94.7 ± 11.1 cm (mean \pm SD), for the male subjects versus the female pharmacists in the sitting position. The distance of male subjects shorted when they had positive emotions and lengthened when they were

worried. Female subjects maintained a long distance from both male and female pharmacists when they had positive emotions and a short distance when they were worried.

Conclusion: Findings show that the distance changes depending on the subjects' mood at the time of measurement. It was found that the present measurement method can be used to determine the psychological state of the patient and measure the comfort distance at that time, and can be used as a simple method to examine these relationships. Therefore, it is also considered a practical method for the next step, which is a clinical study on patients.

Building a sustainable future with comprehensive medication management: A case study

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Background: Comprehensive medication management is defined as the standard of care that ensures each patient's medications (whether they are prescription, nonprescription, alternative, traditional, vitamins, or nutritional supplements) are individually assessed to determine that each medication is appropriate for the patient, effective for the medical condition, safe given the comorbidities and other medications being taken, and able to be taken by the patient as intended.

Purpose: Provide an overview of comprehensive medication management. Identify and address cardiometabolic needs of people with diabetes using comprehensive medication management. Develop comprehensive medication management for people with diabetes in a primary care setting using a team-based approach.

Method: Comprehensive medication management includes an individualized care plan that achieves the intended goals of therapy with appropriate follow-up to determine actual patient outcomes. This all occurs because the patient understands, agrees with, and actively participates in the treatment regimen, thus optimizing each patient's medication experience and clinical outcomes.

Results: One way to measure value is through the calculation of return on investment (ROI), or how much value the service adds compared to the cost of delivering the service. ROI data are frequently difficult to obtain and vary significantly, depending on the patient population being evaluated. However, the ROI of medication management services has been established. The data from the delivery of this service are positive, with a demonstrated ROI of as high as 12:1 and an average of 3:1 to 5:1. ROI reflects an ability to decrease hospital admissions, physician visits, and emergency room admissions and reduce the use of

unnecessary and inappropriate medications. This is a conservative estimate; the ROI is likely to be much greater because practitioners routinely underestimate the impact on a patient's life and it is not easy to put a number on high patient satisfaction and physician acceptance.

Conclusion: The value of this service can be measured in several ways. First, the patient benefits from improved outcomes. In addition, the patient benefits directly from the increased individualized attention to medications and the role they play in his or her daily life. Third, physicians benefit when someone with pharmacotherapeutic expertise is able to help manage complex drug therapies. Physicians can dedicate more time to the diagnostic and treatment selection process, enabling them to be more efficient, see more patients, and spend more time providing medical care. Keeping patients out of the hospital is one of the most cost-effective outcomes and providing comprehensive medication management to complex patients is one way to accomplish this.

Pilot testing a virtual interactive case system innovation to support pharmacist prescribing for minor ailments

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Background: Current literature on virtual cases illustrates increased learner self-directed learning and satisfaction. Virtual cases have not been explored in the context of pharmacist prescribing for minor ailments (PPMA). Providing pharmacy professionals and students with continuous professional development opportunities that mimic or simulate real practice, such as via the use of the Virtual Interactive Case (VIC) System may facilitate the uptake of PPMA in community practice.

Purpose: Our pilot study aims to seek user experience of three minor ailment cases (allergic rhinitis, conjunctivitis, and herpes labialis (cold sores)) through VIC.

Method: An online user experience questionnaire was disseminated to pharmacy professionals and pharmacy learners who have completed at least one of the three pilot PPMA VIC scenarios. We asked about participants' subjective/perceived changes in confidence in conducting PPMA patient assessment, implications, and intention to practice changes after attempting the VIC cases.

Results: We received a total of 21 responses, which included eight pharmacy students and 13 pharmacists. Feedback to the pilot PPMA VIC cases was generally positive: 95% of respondents indicated that the cases were easy to understand and follow; 62% agreed or strongly agreed that after completing the cases, they perceived an increase in

confidence in conducting patient assessment and management of minor ailments. Suggestions for improved user experience included revising some of the patient interview questions, incorporating comprehensive scoring and feedback in the final case debriefing, and developing more scenarios. We refined the three PPMA VIC scenarios accordingly and developed an additional ten scenarios in response to the feedback and interest that was expressed by the respondents.

Conclusion: The VIC System may help support and stimulate pharmacist confidence and uptake in minor ailment prescribing. Utilization of virtual interactions such as the VIC System digital innovation may be adapted to other educational programs or curriculums.

Podcast on quality improvement and leadership for early career healthcare professionals in pharmacy practice

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Background: Podcast is a resource to complement traditional didactic-based continuous professional development (CPD) on quality improvement (QI) and leadership. The recent engagement of pharmacy regulatory authorities across Canada in mandatory quality assurance programs to improve medication safety culture in pharmacies via medication incident reporting and shared learning has demonstrated a national interest in QI. CPD on QI, medication safety, leadership, and business management through podcast will provide pharmacy professionals with a dynamic and engaging educational resource that can be accessible anywhere anytime.

Purpose: The objective of the Leading with Quality Podcast was to create a virtual resource for early career healthcare practitioners in pharmacy practice to learn about QI, medication safety, leadership, and business management, etc.

Method: We developed seven episodes where seven guest speakers, ranging from faculty members to clinical directors, shared their QI and leadership experiences in higher education, management and administration, pharmaceutical industry, provincial regulatory authority, and experiential learning. An interview format with real-life examples and lived experiences from the presenters, along with an average duration of 30 minutes per episode, was maintained to optimize audience engagement. We released the podcast on SoundCloud first as a pilot and administered an online questionnaire to pharmacy professionals across Canada to obtain feedback on their perceived value and relevance of content and knowledge gain in QI and leadership after listening to the pilot episodes.

Results: A total of 20 responses were collected within a month of dissemination of the online user experience questionnaire. Respondents perceived the podcast episodes to be valuable and relevant and that they improved their knowledge about leadership and QI. They would listen to more episodes and recommend existing episodes to other healthcare professionals and learners. A few respondents mentioned that certain concepts and jargon should be explained at the beginning of the episode to improve clarity, and that some episodes might benefit from dividing into two sessions to allow for more elaboration on the subject matter. After learning from the pilot, we created a playlist on Spotify, featuring the Leading with Quality Podcast series.

Conclusion: The Leading with Quality Podcast is an accessible educational resource for healthcare professionals who wish to learn more about QI and leadership. It will serve as a self-directed and easy-to-access CPD resource to support early career healthcare professionals in pharmacy practice to learn about QI, medication safety, leadership, and business management through lived experiences from healthcare leaders.

Pharmacist prescribing for minor ailments (PPMA) in Ontario, Canada: Needs assessment of pharmacy students

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Background: As of January 2023, Ontario (a province in Canada) pharmacists have prescribing authority for minor ailments (i.e., pharmacist prescribing for minor ailments or PPMA). Currently, no literature has explored the attitudes and preparedness of pharmacy students towards PPMA.

Purpose: The objective of this study is to identify pharmacy students' perceived confidence, readiness, and needs, including potential barriers and facilitators of PPMA.

Method: This is a needs assessment project, where we surveyed 465 senior University of Toronto PharmD students using a 30-item online questionnaire, which was distributed via the student listserv and Facebook page for a two-week period from October 11 to 25, 2022. Quantitative data collected were analyzed using descriptive statistics. Thematic analysis of free-text input was performed.

Results: We received 67 responses (14.4% response rate). Of the 13 minor ailments approved for PPMA in Ontario, students were most confident in managing gastroesophageal reflux disease and uncomplicated urinary tract infection, and least confident in skin conditions (e.g., impetigo and tick bites). Students' confidence was associated with their perceived preparedness acquired from the school curriculum, frequency of ailment encounters, and complexity of the condition. Student-perceived barriers to PPMA included lack of time, legal liabilities and risks, and minimal financial compensation, as indicated by 97%, 84%,

and 81% respondents, respectively. Students were concerned about potential mistrust from other prescribers and inadequate knowledge. Notably, 96% respondents agreed that additional resources could guide decision-making and 90% respondents perceived that increased number of pharmacy staff would be beneficial to support PPMA. Having access to health records and enhanced pharmacy software would also facilitate PPMA.

Conclusion: Students' confidence in managing the 13 minor ailments differed based on their learning and practice experience, familiarity with the conditions, and complexity of the disease. Various barriers and facilitators towards PPMA were identified. However, our study's low response rate may impact validity of findings. Further research is warranted to better understand students' attitudes, needs, and perceived barriers and facilitators of PPMA.

Community pharmacies contribution as partners of a social community project through provision of a medicines use review service to vulnerable older persons

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Background: Patients showing low health literacy levels experience more difficulties in accessing health care system and achieve poorer health outcomes compared to those with higher levels.

Pharmacies and community pharmacists represent an accessible resource for health and medicines information and can play an important role in the promotion of health and quality of life for older population.

Purpose: To analyze the contribution of medicines use review (MUR) pharmacy service in vulnerable older persons from 'Espaço Saúde 360º Algarve', a social community project that aims to promote health literacy among older population in Algarve region.

Method: One of the activities of 'Espaço Saúde 360º Algarve' enclosed the conduction of a MUR service - "I Know my meds", in closer articulation with local pharmacies and support of University of Algarve.

Polymedicated participants (4 or more medicines) were referred by the project team to the service of MUR. Local pharmacies provided this service, which entailed the analysis of the medication history and a presentational interview.

Each participant scheduled a visit to one adherent pharmacy, and then a pharmacist provided the MUR service considering all medicines and health products currently used and which they took with them.

At the end, the pharmacist provided a 'Medicines registration card' to each participant.

The service was registered in the pharmacy computer system, and the pharmacy was remunerated through a solidarity fee of 5 euros per service.

Results: A total of 96 participants were signalled to benefit from MUR service.

A group of 15 pharmacies joined the project, 10 actively provided the service, with 47 MUR services already been carried out.

Participants were mainly female (87,2%; n=41), widowed or married (35,9% and 46,2% respectively), having a mean age of 74,5±5,5 years old, in which ~50% had only 4 years of schooling.

These participants used a median of 7 medicines (prescription medication), with a maximum of 14 medicines, and 1 further product (non-prescription medicine, food supplement or other).

During the MUR service, 72 drug related problems were identified, a mean of 1,5 ± 1,4 per participant. Non-adherence situations were flagged in 42,6% (n=20) and problems related to inappropriate timing or dose intervals were signalled in 38,3% (n=18) of the participants. Furthermore, suspected adverse drug reactions were identified in 5 (10,6%) participants.

In all cases, and because of MUR service, a pharmaceutical intervention proposal was performed, mainly at patient and drug level.

Conclusion: The provision of MUR service helps to improve the medication use process.

The inclusion of this service within the scope of a social innovation project makes it possible to reach specific population groups, such as older vulnerable populations, usually having more difficulties in managing health resources, like medicines. The collaboration with pharmacies and its professionals, which are close to the community, easily accessible and with duly qualified professionals, should be considered in the future as an essential strategy in the field of local health and social plans, as well as in the design of new remuneration models for pharmacy services.

Exploring Australian community pharmacists' willingness to charge patients for cognitive pharmacy services.

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Background: As community pharmacy evolves in Australia, pharmacists' roles and scope of practice are expanding including a greater focus on providing cognitive pharmacy services. At the same time government reforms have reduced revenue from government sources highlighting a need for new revenue streams as community pharmacy

evolves. A possible revenue source is patient-funded cognitive pharmacy services. However anecdotally, pharmacists appear hesitant to charge patients directly for these services. Personal values influence an individual's decisions and behaviour; pharmacists' personal values may be linked to their hesitancy. Schwartz's Theory of Basic Human Values describes the 10 common values as benevolence, tradition, conformity, security, universalism, self-direction, hedonism, stimulation, achievement, and power. Schwartz's Theory a validated framework for investigating values, is appropriate for exploring how values influence pharmacists' willingness-to-charge.

Purpose: This study explored pharmacists' willingness to charge patients for cognitive pharmacy services including the influences of pharmacists' personal values.

Method: Semi-structured interviews of Australian community pharmacists were conducted during 2020. Participants were recruited using purposive snowball sampling. The interviews were conducted by the primary researcher face to face or via video conferencing. Interviews were conducted using a topic guide with questions structured around the 10 values as defined by Schwartz Theory of Basic Human Values. Participant recruitment and interviews continued until saturation of themes was reached. Interviews were transcribed verbatim by the primary researcher. Thematic data analysis was undertaken using Leximancer and text excerpts were examined for comments representing values orientations.

Results: Twelve community pharmacists from a mix of metropolitan, regional, and rural locations across Queensland and northern New South Wales participated in the study. The themes that emerged were 'people', 'service', 'pharmacist', 'health', 'free' and 'price'. The analysis of text excerpts revealed prominent values orientations included 'tradition', 'benevolence', 'security', and 'conformity'. 'Conformity' appeared consistently across all themes, 'benevolence' was prominent throughout the 'health' theme, 'tradition' throughout the 'free' theme and 'security' throughout the 'service' theme. Participants indicated an unwillingness to charge patients for services traditionally undertaken at no charge to the patient such as blood pressure monitoring. They expressed concern regarding the possibility of exacerbation of a patient's medical condition if pharmacists started charging patients for these services. Participants indicated that pharmacist-delivered services should be provided free to the patient with remuneration coming from other sources such as the Australian government. Within the 'service' theme there was an indication participants may be willing to charge for services outside of pharmacists' conventional scope of practice.

Conclusion: Pharmacists' personal values orientations are not only compatible with pharmacists' role of caring for patients' wellbeing and providing traditional services but also explain why they appear reluctant to charge patients directly for services. Therefore, strategies such as the introduction of innovative services not traditionally offered in Australian community pharmacy are required to mitigate

the impact of pharmacists' values. Future research should investigate which novel services pharmacists may be willing to offer and patients would be willing to undertake under a user-pays model within community pharmacy.

Are Australian community pharmacy patients willing to pay for pharmacists' consultations?

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Background: Community pharmacy is the most accessed health destination in Australia. It is relied upon to provide not only for medication supply but also as a network of access points for vital health incentives such as the 'National Diabetes Services Scheme', 'Opioid Replacement Therapy' and the 'Needle and Syringe Exchange Program'. In Australia many community pharmacies are small businesses whose financial sustainability is being challenged due to the impact of government remuneration reforms and the highly competitive community pharmacy landscape which has resulted in decreased revenue and profitability. To continue to ensure the availability of these businesses to not only provide medication but for patient access to important health programs it is important to prioritise investigating new revenue streams outside of Australian government remuneration.

Purpose: To determine if community pharmacy patients would be willing to pay for a clinical, medicine or condition-based consultation with a community pharmacist.

Method: Participants were Australian residents 18 years or older who had visited an Australian community pharmacy at least once in the previous 12 months. Participants were recruited and the survey was distributed via online consumer panel research company The ORU. The online survey was designed using the Qualtrics platform. As well as demographic data questions, a question with four different consultation durations were provided: Short (up to 10 minutes), Medium (10-20 minutes), Long (20-30 minutes), and Extra-Long (30-40 minutes). Participants were asked to indicate the maximum dollar amount they would be willing to pay for each consultation duration on a sliding scale from \$0 to \$225 and advised to select \$0 if they would not be willing to pay for the described consultation. Data were cleaned and invalid or nonsensical responses removed. The remaining valid data were analysed using SPSS statistical software. For each consultation length, the median and interquartile range (IQR) were calculated for the responses that indicated willingness to pay.

Results: A total of 455 valid response were received. Of these 361 (79%) indicated they would be willing to pay for at

least one duration of the described clinical, medicine or medical condition-based consultation with a pharmacist. This include 310 (68%) participants who indicated they would be willing to pay for a Short consultation, 342 (75%) a Medium consultation, 355 (78%) a Long consultation, and 356 (78%) an Extra-Long consultation. The median and IQR for each consultation duration was: Short \$20.00 (IQR \$10.00-\$29.25), Medium \$25.00 (IQR \$15.00-\$42.25), Long \$33.00 (IQR \$20.00-\$53.00), and Extra-Long \$41.00 (IQR \$25.00-\$71.00).

Conclusion: This study demonstrates that Australian community pharmacy patients are willing to pay for a clinical, medication or medical condition-based consultation provided by a pharmacist. Therefore, community pharmacies could potentially generate a new source of revenue if patient-funded pharmacist consultations are introduced. For patients a pharmacist consultation may provide timelier access to information and healthcare for their medical conditions and medications. Future research would need to explore what could be provided under this model and the logistics of implementation into community pharmacy.

Building capacity for pharmacist administration of vaccines and other injectable medicines in Brazil: an example of collaboration between Portuguese speaking countries

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Background: Community pharmacists play an important role globally in administering vaccines, leading to improved access and vaccination rates. In Brazil pharmacists were authorized in 2018 to provision of vaccination service; this was followed by the development of a capacity-building programme by the profession's regulatory body (CFF). A gap in training resources led to the adaptation of a textbook on the topic published in 2015 by CFF's Portuguese counterpart (OF).

Purpose: Outline the transnational collaboration process and its outputs, serving as a model for others to leverage existing resources.

Methods: The CFF contacted the Portuguese textbook editors (GMP and MPG), forming a transnational coordinator group (GMP, MPG, JCQPF, BPCL). This group worked closely with multidisciplinary Brazilian authors to adapt the

manuscript to local reality and update it with the latest evidence. Chapters were iteratively revised by the editors and authors in both countries. In parallel, the CFF sought a formal partnership agreement with OF.

Results: The overall process took 4 years, mainly due to uncertainties in regulatory aspects and the COVID-19 pandemic. The textbook was released in digital open access and print format. It comprises 8 chapters covering from fundamental concepts in immunology to the administration of vaccines and other injectable medicines. The textbook has been used for CFF's training course, which has accredited over 3000 pharmacists as immunisers.

Conclusion: By adapting this textbook, CFF was able to bridge the resource gap and provide pharmacists with a tool to deliver high-quality services. Collaboration offered learnings for all parties and strengthened ties at an individual and institutional level.

Regulation of the role of the pharmacist in providing vaccination services

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Background: In Brazil, the pharmacist has been involved in research, production, selection, planning and distribution of immunobiologicals and in Health Surveillance. The Law 13.021/14 and the Resolution of the Collegiate Directorate (RDC) of Anvisa nº197/2017 brought the possibility of the provision of the vaccination service by the pharmacist, making professional regulation necessary in Brazil.

Purpose: Present the process of construction of the professional regulation.

Methods: The Federal Pharmacy Council (CFF) has set up a group of experts to elaborate the professional resolution that establishes requirements necessary for the provision of the vaccination service by the pharmacist.

Results: In 2018, Resolution nº 654/2018 was published, which defined the attributions of the immunization pharmacist (reception; anamnesis; conducts; preparation and administration of vaccines, waste management; health education; follow-up of events supposedly attributable to vaccination or immunization; referral to another health professional) and training criteria for the provision of the service. Since then, the theme has been incorporated into undergraduate and graduate programs. Besides the

regulation, in order to capacitate pharmacists, the CFF launched the course "Vaccination Service by Pharmacists" and published the book "Administration of vaccines and other injectable drugs by pharmacists" (in partnership with the Ordem dos Farmacêuticos de Portugal).

Conclusion: The regulations resulted from the courage of the profession's leaders, political articulation, intense debates, and the capacity of professionals and managers. It is expected that this whole process will contribute to a greater awareness of the role of the pharmacist as immunizer and that it will contribute to the increase in vaccination coverage in the country.

Construction of a nationwide course on asthma for pharmacists in Brazil

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Background: In 2022, the International Pharmaceutical Federation (FIP) called for pharmacists to prevent and mitigate the impact of air pollution, as well as the management of chronic respiratory diseases. However, in Brazil there is no nationwide course on the subject for pharmacists.

Purpose: Describe the development of a nationwide course to qualify Brazilian pharmacists in order to provide pharmaceutical screening services and health education in asthma, in primary health care.

Method: This is a descriptive study about the development of a course brought by the Federal Council of Pharmacy of Brazil (CFF), based on the Trahentem® learning design methodology. Documental analysis was used, of digital and physical documents produced during the development of the course. In 2022, the CFF established a group of experts in the field of education and care for people with asthma, responsible for developing the course.

Results: In stage I (diagnosis and initial planning phase), in two meetings, the Canvas tools of the Trahentem® method were used and the main needs of people with asthma and the learners of the course were identified; the personas of

patients and pharmacists were built; and the purpose, knowledge to be addressed and learning objectives of the course were identified. In stage II, after five meetings, the pedagogical project of the course was detailed and structured with 3 parts: I) distance learning and self-instruction, available in the CFF platform, with content aligned with the FIP guidelines (40h); II) face-to-face step, focused on the development of skills and attitudes for asthma care and use of inhaler devices (15h); III) in-service practice, with care provision to people with respiratory symptoms (5h). Pedagogical materials will also be developed for the course.

Conclusion:

It is expected that the course provides the qualification of pharmacists to provide screening services and health education in asthma and encourages this practice.

Pharmacists as a safety net

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Background: The pharmacist-doctor relationship is fundamental in ensuring the prescription is accurate and safe for the patient. Little research exists on the relationships between community pharmacists in practice or the different roles held within this relationship. The patients depend on the pharmacist to lead these interactions, for the correct prescription to be dispensed. Interventions by members of the pharmacy team Continuous interactions between community pharmacists and medical prescribers occur for approximately one in five prescriptions to check doses, potential medication changes and, or missed items.

Methods: Our interview-based study recruited 16 general practitioners who agreed to participate in a 50-minute interview over their lunch break. Questions included the type of relationship they held with their local pharmacy, how they communicated together, the frequency and mode of that interaction, and how they valued the community pharmacist as part of the healthcare team. Recordings were transcribed verbatim and our analytic process was grounded in the constructivist tradition of Corbin and Strauss, and The project received ethics approval from the Victoria University of Wellington Human Ethics Committee (#28324).

Findings: Our participants expressed enormous respect for pharmacists' specialist medicines expertise. They described using pharmacists as a resource: calling them to ask about medicines and alternatives and taking into account their judgement when making prescribing decisions. One doctor tried to encourage her patients to use their pharmacist more, consulting them for minor ailments that might have over-the-counter remedies. Doctors clarified that pharmacists acted as a 'safety net' for their prescribing practice. They recalled receiving phone calls querying dosage, counter-indications, and new or removed medicines. Whilst this has sometimes been framed as

'policing', in interviews, doctors expressed gratitude and reassurance for this pharmacy labour, which they saw as a safeguard both for patients and themselves. However, this safety net is actively produced by pharmacy teams through diligent checking and relationship building. It represents a significant source of unrecognised (and uncompensated) labour.

Discussion: good relations between doctors and pharmacists, which support in turn, good relations between patients and their care providers. Trust, mutual respect, and continuity of care can be expected to translate into clinical outcomes. Making two-way communication between doctors and pharmacists easy will facilitate good medicines practice, but policy and remuneration also needs to keep up with the myriad forms of labour that ensure patients receive and take the right medicines. Much of this labour is relational and difficult to quantify, but that does not make it any less real nor important.

New Zealand community pharmacy—A challenge too far?

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Background: New Zealand pharmacy ownership is constrained to holding interest to a maximum of three pharmacies. In 2020 as the first waves of Covid-19 hit New Zealand shores, so did Australian Discount Pharmacies which are not bound by the same regulations. In New Zealand, patients pay a \$5 health tax for their first twenty medications, and for many, this is unaffordable. Discount Pharmacies pay the \$5 tax for each prescription item on behalf of the patient. We wanted to know how patients felt about these companies.

A multi-million dollar owner backs Australian discount pharmacies. New Zealand community pharmacies are generally privately owned and have little financial resources for competition with global companies.

Methods: Our interview-based study was set in a community pharmacy practice in a community of high health needs. We observed interactions between patients and the pharmacy team and any interactions with medical practitioners. During this time, we also interviewed 33 (19 male and 14 female) people who visited the pharmacy and asked them about their medicines and things that affected their medication adherence. Interviews were recorded with consent and then analysed using a reflective approach to thematic analysis. Our themes settled into Communication, Trust, and Affordability.

Findings: Communication and trust supported the patient to engage with the pharmacy team and resolve to take their medication regularly. However, for some, the affordability of medicines was a problem and one that people were very

embarrassed about. Participants shared how they had tried the free pharmacies but never returned after filling the first prescription. Comments included: "I went there to try it, you know, but I was last in a very long queue. No one knew me or talked to me. I came straight back here." (Male) A female participant shared how she had always thought that getting a prescription was a transaction rather than a service; until she went to a discount pharmacy and realised she missed the service from her local community pharmacy.

Discussion: Our participants were generally loyal to their local community pharmacy practice, but if they strayed, they soon returned for friendship and connection. It is of concern that 70 community pharmacy practices have closed in direct response to the proximity of a Discount Pharmacy. New Zealand pharmacies are generally privately owned with little capital to support hostile takeovers by overseas pharmaceutical companies. New Zealand community pharmacists also have a personal limit to how many pharmacies they can own or have a financial interest in, but warehouse pharmacies do not. Instead of increasing equity in accessing medicines by removing the \$5 copayment, the entrance of warehouse pharmacies to New Zealand has increased inequity due to the closure of 70 local pharmacies that had known their patients for many years and held knowledge of the people in the local community for generations in some instances. In previously reported research, our participants shared that trusting and knowing the local pharmacy team enabled them to trust the advice they were given and this supported their engagement in becoming medication adherent.

Community pharmacists' perspectives of involvement with social prescribing for mental health

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Social prescribing (S.P.) aims to support people with poor health related to socio-demographic determinants. Positive effects of S.P. on self-belief, mood, well-being, and health are well documented, including a return to work for long-term unemployed. This research aimed to explore participant perspectives on S.P. for mental health and well-being and the acceptability of community pharmacists as members of S.P. pathways that support people with mild to moderate depression and anxiety. It was set in a city in southwest England with diverse culture and socio-demographics. This qualitative study recruited S.P. stakeholders, including community pharmacists (CPs), to either one of 17 interviews or a focus group of nine public members.

An inductive iterative approach to thematic analysis resulted in four superordinate themes; (1) Offering Choice – a non-pharmacological approach (2) Supporting pharmacy communities- "It's an extension of what we do", (3)

Stakeholder Concerns on Pharmacy Busyness, and (4) Potential for Pharmacy in Primary Care.

Most stakeholders viewed C.P.s as local to and embedded within the community and subsequently accessible by community members. Pharmacists perceived referral to S.P. services as part of their current role. General practitioner (G.P.) participants considered pharmacy involvement potentially reducing their workload and expanding the primary healthcare team. Importantly G.P.s and C.P.s viewed S.P. as a non-pharmacological alternative to prescribing unnecessary antidepressants, thereby reducing inappropriate prescribing and associated adverse effects. Both stakeholder and pharmacist participants voiced concerns about pharmacy dispensing busyness as a potential barrier to involvement, with pharmacist participants highlighting the need for mental health training.

Our key findings suggest that C.P.s offer a potential alternative to the G.P. for people with mild to moderate depression and anxiety seeking access to support and health information. However, C.P.s need appropriately commissioned and funded involvement in S.P., with backfill for ongoing activities, including dispensing and medicines optimisation services, and for Mental Health First Aid training.

First outcomes in providing new pharmaceutical services in community pharmacies in Romania

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Background: New pharmaceutical services were approved in Romania through the Romanian Ministry of Health Orders no. 2382/2021 and 3262/2022, and therefore the pharmacists working in Romanian community pharmacies must be trained in implementing the new pharmaceutical services, such as therapeutic education, support of medication adherence, medication review or vaccination. The new role of the pharmacist in administering a vaccine in Romanian community pharmacies was approved through a pilot program of flu vaccination.

Purpose: We aimed to assess the correlation between the perspectives of pharmacists on administering a vaccine in community pharmacies and the number of pharmacies and pharmacists involved in the pilot program of Romanian Ministry of Health till March 2023. The pilot program of flu vaccination by community pharmacists in Romania started in November 2022 with authorization of community pharmacies for the new pharmaceutical service and with providing postgraduate lectures for pharmacists.

Method: A survey consisted of 19 items was applied on Romanian pharmacists to understand the perspectives of community pharmacists in Romania regarding the

vaccination administration. The qualitative and quantitative analysis were performed with GraphPad Prism 9 software. Univariate and multivariate analyses were performed to find the factors influencing the perception of administering vaccines in community pharmacies, and the adjusted odds ratio (AOR) was calculated. The 95% CI for the odds ratio was assessed for every predictor. The results with the value of $p < 0.05$ were considered as significant. The data from the Romanian Ministry of Health site regarding the community pharmacies that were approved to provide the flu vaccination pharmaceutical service were compared with the outcomes from the survey.

Results: The need to implement this pilot program is justified, given that the vaccination coverage rates in Romania are decreasing, and the 2022-2023 flu season is more severe compared to the last two seasons, which is why the epidemiological alert state was established due to flu. Only 92 pharmacies (75, 81.5%, pharmacies were from urban) were included in the list of approved community pharmacies that could provided the pharmaceutical service of flu vaccination. The number of community pharmacies are 9,823 at a population of 21.9 million people in Romania in 2022. Only 1% of the community pharmacies wanted to be included in the pilot program of vaccine administering in Romania.

According to the survey, a number of 91 (53%) pharmacists agreed to the new pharmaceutical service in the community pharmacies, and the factors associated with the willingness to administer vaccination in community pharmacies are the lack of a special place where to administer vaccines (Crude Odds Ratio=0.02, 95%CI: [0.001-0.16], p -value<0.0001; Adjusted Odds Ratio=0.03, 95%CI: 0.001-0.082, p -value=0.038) and the lack of a training (Crude Odds Ratio=0.014, 95%CI: [0.002-0.12], p -value<0.0001; Adjusted Odds Ratio=0.02, 95%CI: 0.002-0.001, p -value=0.001).

Conclusion: The study found that even if the community pharmacies included in the first phase of the pilot program is small, the Romanian pharmacists are prepared for the new challenge, as the new legislation approved new regulatory for the pharmacists training and for the special space needed for the new pharmaceutical service.

Collect your free outpatient medication at your local pharmacy

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Background: In 2018, Denmark saw 2.8 million somatic outpatients contacts. Patients who are not admitted to the hospital but still receive hospital treatment can, sometimes, be provided with free outpatient medicine (FOM) from the hospital. The medicine wholesaler delivers the FOM to the hospital pharmacy and is transported from the hospital pharmacy to the outpatient clinic. The patient can then collect the FOM. However, not all hospitals have a hospital pharmacy, and not all hospital pharmacies have an

outpatient clinic. It is also not possible to collect the FOM at a local pharmacy. As a result, some patients must travel to another city to collect their FOM.

Purpose: Would it save time and be more convenient for patients if they could collect their FOM from their one-project local pharmacy?

Method: Patients choose whether they want to collect their FOM at the nearest hospital or their one-project local pharmacy. An order is sent to the hospital pharmacy by the outpatient clinic. The medicine is packed by the hospital pharmacy and medical transport from the medicine wholesaler is arranged. The FOM is collected by the transporter once a week, including cold-chain medicine. The FOM is delivered to the local pharmacy the following day along with the usual medication. The patient is notified via electronic mail when the medication is ready for collection. Upon collecting the FOM, the patients are asked if they would like to participate in an interview. A questionnaire is conducted for the interview, with patients providing their responses over the phone. During the interviews, the patients are asked about the convenience and time consumption upon collecting their FOM at the local pharmacy compared to the hospital pharmacy. The patients are also asked for advice on how to improve this new arrangement.

Results: Data collection in progress

Conclusion: Data collection in progress

3D printing of tablets in the community pharmacy: quality and reproducibility.

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Background: Over the last decades, production of medicines has changed drastically due to innovation and modernization. Pharmaceutical compounding of solid oral dosage forms on the other hand, is still mainly done by the good old mortar and pestle. Nevertheless, compounding drugs for an individual patient stays extremely relevant in the context of the growing importance of personalized medicine. Next to filling powders in capsules, a more pioneering approach could be the 3-Dimensional Printing of tablets. Extrusion-based 3D-printing such as Fused Deposition Modeling (FDM) is an easy-to-use, relatively cheap manufacturing technique that could be used to produce tailored precision medicines at the community pharmacy scale, close to the patient.

Purpose: One of the therapeutic domains where we see an advantage of this innovative technology, is in the withdrawal of long-term benzodiazepine receptor agonists (BZRA) use. Since February 1st 2023, Belgian community pharmacists

can prepare and dispense reimbursed tapering programs. This approach, combined with counseling by the pharmacist can help deprescribing these drugs. For the time being, the pharmacist compounds small batches of capsules (10, 20 or 30 units), with variable (diminishing) doses of BZRA. Printing these small batches with a low dosage (down to dosages <1mg) could be beneficial for quality¹.

As national federation of professional association of independent community pharmacies, APB has a history of focusing on the quality of compounded medicines. We believe that in that respect we also have to concentrate on quality when developing new techniques.

Method: Taking the most prevalent BZRA (zolpidem hemitartrate), we found out that the quality of FDM printed tablets depends among others on the mechanic and rheological characteristics of the feedstock material, and the behavior of the drug-loaded filament during conservation. These parameters have their effect on printability, the reproducibility of the printed tablets, and their dissolution profile.

In a broader perspective, we also used theophylline loaded filaments to study the impact of different storage conditions and their influence on printability (mechanical properties) and reproducibility (size, mass, content).

Results and discussion: The results seem to indicate the importance to optimize filament composition and extrusion parameters specifically for each Active Pharmaceutical Ingredient.

Measuring patient counseling time in community pharmacy

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Background: Pharmacy medicine counseling is an important part of health care and it is mandatory in Finnish pharmacies. Counseling is offered free of charge without prior time reservation during pharmacy business hours. The personnel providing medical information are academically educated and customer gets the information that guarantees safe and efficient use of the medicine. The content and the quality of counseling has been widely reported, but the actual consumed time for counseling during the dispensing process is not known.

Purpose: To estimate the total time used for customer counseling as a part of the dispensing process. That way we can demonstrate the importance of pharmacists role in medical care.

Method: We conducted a straightforward time measurements for pharmacist dispensing prescription medicines. The process was divided into five parts and time of these parts were recorded. Dispensing was divided as followed: 1,

customer calling, his/her identification and collection of the reimbursement -information. 2, log in to his/her electronic prescriptions, selection and pricing the prescriptions. 3, medicine package verification, attaching the dosage label, providing the necessary medicine counseling 4, dispensing electronic prescriptions to nationwide prescription registry, sending sum to the state reimbursement system, registering the entire process to then pharmacy database, giving further counseling if needed. 5, transferring the reimbursement discounted price to cashier program, receiving payment, packaging and printing the bill to customer. The data was collected from several pharmacists during two separate days and combined for analysis. Only customers with one prescription were included for the sake of simplicity, other prescriptions were excluded. Selected single prescription types represented about one third of the total amount (n = 800) of the daily customers.

Results: Complete dispensing process took in average four minutes, starting when customer was called to the service desk and clock was stopped when bill was printed out. During the second measurement day the overall process was faster and included less deviation than during the first day measurements. During the process, mostly basic counseling was given, for example how to take and store the tablets, for what purpose medicine is and how long the treatment is. In Finnish pharmacies a wide range of computerized aids provide pharmacist with up to date - information about the customers medication history and adverse effects. In about five percent of the cases further counseling was needed.

Conclusion: Based on our measurements, we can approximate that about half of the dispensing time is used for counseling. Majority of the customers however, buy more than one medicine at a time. In addition, many prescriptions are complex, require preparation, injections or include usage of special instruments. Therefore, we can estimate as a whole, that at least two third of the pharmacists time is consumed by the counseling, and one third is used for actual mechanical dispensing process.

Drug safety management of Paxlovid use in patients with COVID-19 in Taiwan community pharmacies

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Background: Paxlovid is indicated to treat the patients who were at high risk for progression to severe COVID-19, including hospitalization or death. However, Paxlovid includes nirmatrelvir and ritonavir, which is a protease inhibitor and CYP3A4 inhibitor. It is contraindicated to many medications that are CYP3A4 substrates and inducers, as well as to the patients with eGFR less than 30 since Paxlovid is eliminated through the kidney. Thus, this is an opportunity for the pharmacists to be involved in the Paxlovid use and provide drug safety management.

Method: Three community pharmacists participated in this study and collected patients' lab data and medication history from health insurance database while receiving prescriptions in June 2022 to evaluate patients' renal function and consult drug interactions database to adjust concomitant therapy dose which would significantly interact with Paxlovid.

Results: Total 213 patients who were diagnosed COVID-19 and prescribed Paxlovid within one month. 13 patients were not recommended to take Paxlovid due to either eGFR less than 30 or contraindicated drug interactions. 185 prescriptions were dispensed as usual dose, and 15 were adjusted renal dose. Within 200 patients that received Paxlovid, a total of 540 prescription drugs that patients took were collected from the health insurance database and patient interview, 72 prescription drugs needed to be discontinued during Paxlovid treatment and 63 needed to adjust doses. Most of those concomitant medications were treated for cardiovascular diseases.

Conclusions: Since Paxlovid were mainly prescribed for patients with high risk factors, which included multiple chronic diseases, such as hypertension, type 2 diabetes, and dyslipidemia, drug interactions would be a major issue that need to be aware of. Based on the results, pharmacists help the management in Paxlovid use including the evaluation of Paxlovid dose and drug-drug interaction. It shows that pharmacists play an important role in drug safety.

Factors associated with immunisation registry utilisation amongst independent community pharmacies in the United States

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Background: Immunisation Information Systems (IISs), also known as immunisation registers or vaccine registries, are confidential computerised databases that record immunisations administered by participating immunisation providers. Complete immunisation records in IISs allow providers to determine needed vaccines and prevent redundant immunisations. Immunisers, such as pharmacists, should retrieve patient records from their IIS to assess vaccination status prior to vaccine administration and submit vaccine reports to their IIS after administration. Despite IIS benefits, the use of IISs is sub-optimal, especially for vaccines besides COVID-19 and influenza. Little is known regarding the extent of IIS utilisation and its influencing factors amongst non-chain (independent) community pharmacies in the U.S.

Purpose:

1. Assess the extent to which independent community pharmacists retrieve patient immunisation records and

report immunisation administered to their IIS before and after vaccine administration, respectively.

2. Assess the knowledge and perceptions of community pharmacists related to IISs.
3. Assess whether knowledge and perceptions are associated with IIS utilisation.

Methods: An online survey of 9,446 members of the National Community Pharmacists Association (NCPA) was used to collect data from September - November 2022. Of 493 participants (response rate 5.2%), 202 were included in the analyses (respondents must have provided at least one non-COVID, non-influenza vaccine and responded to subsequent related items). The dependent variables were: self-reported frequency of patient-records retrieval from their IIS (5 response categories, ranging from never (1) to always (5)) and percent of non-COVID, non-influenza vaccine doses administered in the pharmacy that was reported to IIS (0-100%). IIS knowledge was assessed using 6 questions. Perceptions related to innovation characteristics, process, and inner setting, as identified by the Consolidated Framework for Implementation Research as potential influencing factors, were measured with response categories utilising a Likert scale ranging from "Strongly Disagree" (1) to "Strongly agree" (7). Exploratory factor analyses identified 10 scales: compatibility, benefits to patient care, benefits to workflow, ease of use, data quality, engaging process, leadership, culture, communications, and organisational needs. All scales had Cronbach's Alpha coefficient > 0.70. Data was analysed using IBM SPSS Statistics Version 29.0.0.0 (241), with a priori alpha level of 0.05.

Results: About one-third of participants were low IIS retrieval users ("never," "rarely," or "occasionally" responses) while two-thirds were high IIS retrieval users ("frequently," or "always" responses). An average of 84% of non-COVID, non-influenza vaccines administered in the pharmacy were reported to their IIS (SD = 34.3). Respondents had an average knowledge score of 3.6 (SD = 1.4). The lowest and the highest mean scores of the 10 perception scales were 3.9 (data quality) and 5.6 (benefits to patient care), respectively, indicating generally positive perceptions of IISs. All perception factors were significantly associated with the odds of being high IIS retrieval users except IIS compatibility with pharmacy and IIS data quality. Lastly, only ease of use was a significant factor associated with IIS reporting ($p < 0.05$).

Conclusion: Many factors within innovation characteristics, process, and inner setting domains were associated with IIS vaccine-reports retrieval while only ease of use was associated with IIS reporting.

Public perception towards administration of COVID-19 vaccinations by community pharmacists

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Background: As part of the pandemic response, Australia undertook mass vaccination of the population with COVID-19 vaccines which have provisional registration with the Therapeutic Goods Administration. Initial access to these vaccines was via mass vaccination hubs supported by Local Health Networks with nurse vaccinators. As the vaccine rollout progressed, community pharmacists were approved as COVID-19 vaccine providers, however it was uncertain what the uptake and perception of the community would be to consider accessing COVID-19 vaccines in this setting. To the best of our knowledge, this study represents the first Australian investigation, conducted at a mass vaccination clinic, aimed at examining the barriers associated with community pharmacy-based COVID-19 vaccination.

Purpose: To investigate public perception of community pharmacists as providers of COVID-19 vaccinations.

Method: A 7-question voluntary survey was disseminated to consumers who visited a mass vaccination clinic between February and April 2022. Consumers over the age of 18 years of age and had received a COVID-19 vaccination from the centre were invited to participate. Paper surveys were used to facilitate distribution and completion during the 15 minutes post-vaccination waiting period. Questions explored previous vaccination(s) at a community pharmacy, and willingness to receive future COVID-19 vaccinations within this setting. Barriers and enablers were also explored.

Results: Of the 1281 respondents, 937 (73%) indicated they would be comfortable receiving future COVID-19 vaccinations at a community pharmacy. The most common barrier identified was concerns over experience levels of pharmacist vaccinators (167/344, 49%), followed by management of potential allergic reactions (137/344, 40%). Respondents who had previously received a vaccination in a community pharmacy were more likely to feel comfortable having future COVID-19 vaccination at a community pharmacy (265/302, 88%) compared to those who had not (671/928, 72%; $P < 0.001$). Awareness that pharmacists can administer certain vaccines had no effect on the decision to receive future COVID-19 vaccination at a community pharmacy (834/1136, 74% vs 103/146, 71%; $P = 0.55$).

Conclusion: Our survey demonstrated that 73% of consumers feel comfortable receiving future COVID-19 vaccinations at a community pharmacy. Whilst this represents a significant proportion of the public, at a

population level it identifies that 27% of the community surveyed would prefer to receive a vaccination in a clinic supported by Local Health Networks or general practitioners. Prior experience receiving vaccination at a community pharmacy but not awareness of services alone had a positive impact on willingness to receive future vaccination in this setting indicating perceptions may be influenced by past positive experiences. Some of the issues identified such as experience level of pharmacist vaccinators and management of allergic reactions to vaccines as perceived barriers to receiving COVID-19 vaccination in the community pharmacy setting may need further exploration to help improve future uptake and planning and improve public confidence in pharmacist vaccinators.

Effect analysis of outcome of family pharmacist service based on whole-course health management of chronic disease on improving rational drug use patients

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Background: The aging of society brings increasing medical burden of chronic diseases. However, no effective management mechanism has been established in China, and chronic patients cannot receive pharmaceutical care for a long time. This work fills the gap in drug therapy management in the community.

Objective: To establish a model suitable for Chinese pharmacists to participate in chronic disease management, to improve drug effect and reduce disease cost.

Methods: In this plan launched by Nanhai District Government of Foshan City in 2017, pharmacists engaged in chronic disease medication management in different levels of medical institutions in the district formed a cooperative alliance, and joined the medical team to jointly manage patients with doctors and nurses. Pharmacists were responsible for the guidance of patients' medication compliance, medication efficacy tracking, ADR monitoring and other work. There were 287 pharmacists involved. Pharmacists from different levels of medical institutions were engaged in division of labor and cooperation, and service homogenization was realized through data sharing of "Internet + regional intelligent work platform". For difficult

problems that cannot be solved by community pharmacists, remote consultation of pharmacists from medical institutions at higher levels can be invited online through this platform, and the service ability of community pharmacists can be improved synchronously.

In 2021, the implementation effect of this project was evaluated. 74 chronic patients were investigated and grouped into control groups.

Results: Compared with the patients who did not, the group who signed a contract with a family pharmacist had a significant improvement in the indexes of rational drug use:

1. Improvement index score of rational drug use of patients was 4.5, and self-cognition score of rational drug use of patients was 3.9, 10.6% higher than that of control group;
2. The improvement degree of rational drug use behavior of the patients was 4.1 points, 4.5% higher than that of the control group. Among them, "use drugs according to the doctor's advice", "use drugs in the right way" and "unnecessary drug use is reduced" were 4.0, 4.2 and 3.8, respectively.
3. The improvement of healthy lifestyle of patients was 3.4% higher than that of control group.
4. For the patients jointly signed with family doctors and pharmacists, the health outcomes of "control hyperglycemia, hypertension and high uric acid", "decrease of hospitalization times" and "more significant curative effect" scored 4.1, 3.9 and 3.9 respectively, which were over 10% higher than the control group on average.
5. The average outpatient drug cost decreased by 15.3%, 23.4% lower than that of the control group; Per hospital costs fell by over 70%, while in the control group they rose.

Conclusion: This work can help patients to prevent the risk of drug use, improve the effect of drugs, but also significantly reduce the burden of disease, effectively improve the outcome of rational drug use, and provide referable experience for pharmacists to play the role of basic health care in China. In the future, we will focus on the management model of chronic diseases such as malignant tumors.

Readiness and obstacles in order to provide emergency contraceptives of Japanese community pharmacists

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Background: The provision of emergency contraceptives (ECs) for women after unprotected intercourse is an important professional responsibility of community pharmacists in many countries. However, it has not been traditionally provided by pharmacists without prescriptions in Japan. Because ECs are classified as prescription medicine

in Japan, people who need ECs have to see a doctor first and be issued a prescription. The involvement of pharmacists in sexual health would be necessary to make emergency contraceptives more accessible to those who need them.

Purpose: We surveyed the readiness and obstacles in order to provide ECs and to expand the scope of practice of Japanese community pharmacists.

Methods: The survey was a descriptive, cross-sectional, observational study. Any licensed Japanese pharmacist was able to participate. An initial screening question was used to capture eligible participants. The voluntary participants were recruited through email from the Japanese Association for Community Pharmacy (JACP). Before the survey, the participants viewed a video on the practice of provision of ECs in Germany. Then, after giving consent to answer, the participants were inquired about their opinion to provide ECs. This study received approval from the Research Ethics Review Committee of the JACP (No. 202301).

Results: A total of 60 pharmacists were involved in the survey. Male/Female; 24/36, The number of responders who have been consulted about ECs or have experience dispensing ECs was 9 (15%). Fifty-two responders (87%) were in favor of the ECs being re-classified to be a non-prescription drug (pharmacist only or OTC). After viewing the video, 51 respondents (85%) expressed confidence that they would offer ECs if they were available to provide by pharmacists. The materials most needed for pharmacists to be able to provide ECs are the necessary guidelines (n=56, 93%) and a medical interview sheet (n=47, 78%). Obstacles related to pharmacists providing ECs that many participants noted were a support system for customers during hours when the pharmacy is not open (n=39, 65%) and the lack of sexual education in the younger generation (n=32, 53%).

Discussion: Not many Japanese community pharmacists are involved in dispensing ECs with a prescription; however, many pharmacists hope to be able to supply ECs in pharmacies without a prescription. With the provision ECs by pharmacists, ECs will become easy to access and they will be able to reduce unwanted pregnancies without seeing a doctor. The video material introducing actual practice in providing ECs was useful to raise Japanese pharmacists' confidence to provide ECs. It was suggested that the guidelines and check sheet to provide ECs need to be developed to enable many pharmacists to provide ECs. In order for EC to be available anytime and anywhere to those who need it, it is necessary to establish a system to provide it even during hours when pharmacies are not open. To avoid unwanted pregnancy, sexual education for the younger generation is also important. Japanese community pharmacists hope to be sexual health services providers by providing ECs to the people who need them in the community.

Improving hypertension management through a hypertension certification program: A stepped wedge cluster randomized trial (The RxPATH trial)

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Background: Uptake of guidelines into clinical practice for prevention and treatment of chronic conditions is poor. We designed an online educational program for pharmacists, based upon the 2020 Hypertension Canada Guidelines. The Hypertension Canada Professional Certification Program (HC-PCP, <https://hypertension.ca/professional-certification-program/>) is an online course that took three months to complete and consisted of four educational modules, a real-time registry to be used in managing patients, assessment of blood pressure (BP) measurement technique and expert evaluation of pharmacists' hypertension management.

Purpose: To evaluate the impact of the HC-PCP, taken by pharmacists, on systolic BP in patients with BP that is above target.

Methods:

Design: Stepped wedge cluster randomized trial (unit of randomization was the pharmacy)

Setting: Community pharmacies in Alberta, Canada

Population: Patients with BP that is above target: BP>140/90 mmHg or >130/80 mmHg (in those with diabetes)

Randomization: Pharmacies were randomized to the HC-PCP or usual care for 3 or 6 months (usual care groups then received the HC-PCP at 3 or 6 months, respectively).

Intervention: Pharmacists completed the HC-PCP program, then provided care according to the program based upon the 2020 Hypertension Canada Guidelines, to their patients with blood pressure that is above target.

Control: Pharmacists were given a copy of the 2020 Hypertension Canada Guidelines and they provided their usual care to their patients prior to undertaking the HC-PCP.

Outcomes: The primary outcome was the difference in change in systolic BP between groups. The secondary outcome was patient satisfaction using the Consultant Satisfaction Questionnaire.

Results: We enrolled 890 patients from 61 pharmacies (including 104 pharmacists). Using a linear mixed-effect model with BP reduction as the dependent variable and independent variables of treatment allocation, baseline BP, site effect, and patient effect, the intervention was associated with a -4.76 (95% CI -7.50, -2.02, p<0.0001) mmHg systolic BP reduction. Patient satisfaction using the Consultant Satisfaction Questionnaire was high at 76 (out of 90 total)

Conclusion: Most educational programs are not evaluated at the patient level. The HC-PCP taken by pharmacists significantly reduced systolic BP over the treatment period in patients with BP that is above target. Patient satisfaction with pharmacist care was high. This program could be scalable to improve detection and control of hypertension.

A Special Model for Specialty Pharmacy

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RFMO-01 - Rapid Fire Session Monday, M1-M2, September 25, 2023, 11:00 AM - 12:30 PM

In some countries, like the United States (US), there is a distinct system for dispensing expensive and complicated medications called specialty medications. These medications help treat different conditions like hepatitis B and C, human immunodeficiency virus (HIV), multiple sclerosis, oncology, autoimmune disorders, and more. Since these medications are costly and complex, some community pharmacies have centralized specialty pharmacy services to improve clinical and operation offerings. These pharmacies provide high-quality clinical therapy management including initial assessments, re-assessments, education, plan of care, and interventions. They can also help patients with financial assistance, remind them when it's time to refill their medication, and offer free supplies and delivery. Specialty pharmacies may also follow accreditation requirements such as maintaining a quality management committee and clinical oversight body to monitor progress towards meeting quality, safety, and clinical objectives.

In this presentation, specialty pharmacy expert and consultant, Dr. Jill Paslier, PharmD, CSP, FISMP, explains what specialty medications are and why they require specialized pharmacy care. She discusses the unique model of specialty pharmacy in the US, which includes clinical, operational, financial, quality, and safety programs. Dr. Paslier also presents a summary of how patients receive care through this specialty pharmacy model and provides a case example to illustrate the patient's journey and experience.

Dr. Paslier shares valuable insights on lessons learned and best practices from various professional organizations, accrediting bodies, and specialty pharmacies in the US. These insights provide practical tips that can help pharmacists worldwide improve their services and offer better care to their patients. Additionally, the presentation showcases the benefits of implementing an enhanced specialty pharmacy model that may be applicable in other countries. By learning from the experiences of others, pharmacists can better navigate the complex landscape of specialty pharmacy and ultimately enhance patient outcomes.

In conclusion, this presentation offers actionable recommendations and practical tools for developing specialty pharmacy services in community or outpatient pharmacies. The insights can be applied not only in the US but also worldwide. Pharmacists can use these

recommendations and resources to improve and standardize their operational, clinical, and quality programs, ultimately leading to better patient outcomes.

Purpose/Objectives: Discuss business and operational considerations applicable to specialty pharmacy. Apply quality and safety strategies to your specialty medication management.

Develop a clinical assessment process to review and confirm appropriate therapy for patients taking specialty medications.

The development of medication safety competence self-assessment tool for community pharmacies in Finland

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RFMO-01 - Rapid Fire Session Monday, M1-M2, September 25, 2023, 11:00 AM - 12:30 PM

Background: The National Medication Safety Programme for Community Pharmacies in Finland (Valo 2021-2026) aims to enhance medication and patient safety in primary care by developing medication safety culture and practices within community pharmacies. A foundation for the programme's implementation is medication safety competences in community pharmacies. Self-assessment is a valuable method for identifying current competences and areas for development. The results of the self-assessment can be used by pharmacy management to create a current state analysis of the competences and a long-term plan for continuous learning enabling individual and organizational-level competence development.

Purpose: To develop a Medication Safety Competence Self-Assessment Tool for Community Pharmacies in Finland.

Method: The Medication Safety Competence Self-Assessment Tool for Community Pharmacies was developed as part of the Valo programme in collaboration with experts from The National Coordination Group of Professional Development of Pharmacy Services (AATE). The tool is based on the WHO Patient Safety Curriculum Guide: Multiprofessional Edition, a previously developed medication safety competence self-assessment tool for pharmacy students, and experiences of a group of experts in medication safety and community pharmacy practice. A systems approach to medication risk management in community pharmacies was applied as a theoretical framework. The tool was piloted among a convenience sample of community pharmacists and pharmacy students (n=28), and then modified in expert workshops based on feedback. The clarity and usability of the tool were further tested with representatives of the target group (n=5).

Results: The Medication Safety Competence Self-Assessment Tool for Community Pharmacies assesses medication safety competence in six areas:

1. Principles and basic concepts of medication safety (16 items)
2. Medication safety culture (10 items)
3. Risk management in the medication use process – identifying and preventing errors (10 items)
4. Pharmacotherapy (18 items)
5. Medication counselling as a systemic defence (16 items)
6. Management and development of safe medication practices in the community pharmacy context (20 items)

Sections 1-5 are for all community pharmacists. Section 6 focuses on the management and development of medication safety and is intended for pharmacy managers and medication safety pharmacists (responsible pharmacists for coordinating medication safety work in their workplace). All competences are self-assessed on a five-point scale ranging from excellent competence to no competence. The self-assessment is conducted using a web-based self-assessment instrument and can be saved for personal reference. All assessments are saved anonymously in a nationwide database maintained by the Association of Finnish Pharmacies for pharmacy practice development and research.

Conclusion: The Medication Safety Competence Self-Assessment Tool can be used to identify community pharmacists' current competence and educational needs in medication safety. It may help pharmacy managers and medication safety pharmacists to develop medication safety culture and practices in their pharmacy. The tool can be used to target continuing education on both individual and organizational levels. The nationwide data can be used to describe medication safety competences in community pharmacies at the national level. The tool is also suitable for pharmacy students to self-assess their medication safety competence and understanding related key concepts, such as systems thinking.

Integration of Clinical Professional Pharmacy Services in Spain into the care pathway from the patient's perspective

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Introduction: The health care pathway is a process in which a set of coordinated health professionals are involved in order to provide a solution to a specific health problem. The goal of creating these care pathways is therefore to improve care and patient satisfaction.

Collaborative work has been undertaken by pharmacists, doctors, nurses, social workers and patients, represented through 3 Patient Associations, coordinated by the General

Pharmaceutical Council of Spain with the collaboration of Boehringer Ingelheim.

Aim: To define, through collaborative work, the health care pathway for chronic patients, describing the actual and optimal process, integrating the patient's vision and perspective in this process, promoting the appropriate Clinical Professional Pharmacy Services (or SPFA, to use its Spanish acronym) for each phase and making the pharmacist's care value visible.

Methods: Implementation of a methodology in 4 phases (May-November 2022) according to "Patient Experience" models using prospection and analysis tools.

1. Literature review on the particular details of four chronic pathologies.
2. Surveys of patients and healthcare professionals to determine the patient journey for chronic patients in Spain.
3. Define solutions for the integration of SPFA in the process through a service blueprint.
4. Action plan across 4 strategic axes to implement the SPFA in the care process of the chronic patient.

Results: 7 professional surveys and 56 patient surveys as well as 4 focus groups was taken between June-October 2022.

Patients and professionals agreed on the majority of the most important parts of the health care pathway, although patients gave greater importance to the level of specialised care.

Patients are looking for a professional who is more accessible, through multiple channels of communication, with whom they can talk, who is focused on their problems (patients-centered).

There is a high degree of lack of knowledge about the Services from patients, both about their existence and about the multiple benefits they could have for their health, fundamentally due to a lack of homogeneity in the provision of the Services with regional differences and the lack of continuous use; as well as a lack of visibility from pharmacies, because the current legislation on advertising is unequal within the different regions of Spain.

Patients considered Health Promotion, Therapeutic Adherence Service and Medication Reconciliation Service as the most in demand and Smoking Cessation Service, Nutritional Assessment, Compounding Service and Medicine aid kits revision Service as the least in demand.

Conclusion: a global conceptual change is needed so that Pharmacies in Spain can be seen as an active agent of health care and the community pharmacist as a professional qualified to carry out Services, as well as the need to homogenise the range of SPFA available throughout the whole country. In addition, for the correct implementation and integration of the Services in the health care pathway for chronic patients, a series of requirements are necessary in terms of space, resources and training.

Promoting outpatient medication safety in collaboration with community pharmacies and other healthcare providers—What kind of research we need?

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Background: Medication errors are one of the most endangering factors for patient safety, which has become a key target for improvement in health services systems worldwide. The most current development needs are related to outpatient care; however, up-to-date, medication safety research and improvement activities have primarily focused on hospital environments. To promote medication safety in outpatient care, the expertise of community pharmacies could be more effectively utilized. This study was carried out as part of the six-year National Medication Safety Programme of Community Pharmacies in Finland.

Purpose: To explore the current national research needs to promote medication safety as a collaborative action by community pharmacies and other health and social care providers in Finnish outpatient care.

Method: The study applied a modified qualitative Nominal Group Technique (NGT). A group of Finnish patient and medication safety experts (n=43) were invited to participate. The study comprised the following phases:

- 1) Study introduction in an online meeting,
- 2) Electronic survey for silent generation of research needs,
- 3) Online group discussion involving "a round robin",
- 4) Electronic Delphi survey for ranking of the most important research needs.

Phases 2-4 were used for the data collection. The collected data were analysed by qualitative inductive content analysis by ATLAS.ti software.

Results: Altogether 28 experts divided into four groups participated in the study. Five main themes with 22 sub-categories of research needs were identified, on which the research on promoting outpatient medication safety should focus in Finnish community pharmacies and health services system in the future. The main themes and their respective prioritization points were:

- 1) Safe and seamless clinical pathways in outpatient care (n=372/1540),
- 2) Medication safety collaboration between community pharmacies and other health and social care providers (n=361/1540),
- 3) Promoting the safety of work processes in community pharmacies (e.g., monitoring and improving the safety of medication dispensing) (n=317/1540),

4) Reporting of and learning from medication safety incidents in outpatient care as a tool for risk management (n=262/1540),

5) Medication counselling and other community pharmacy services that improve medication safety (n=228/1540).

Conclusion: The current research needs for promoting the medication safety of outpatients in collaboration with community pharmacies and other care providers covering a wide range of areas from strengthening clinical pathways to ensuring internal medication safety processes in community pharmacies. More research is especially needed on how to integrate community pharmacies more efficiently into medication safety risk management of outpatients. The results of the present study will be used in developing a national medication safety research strategy as a part of the National Medication Safety Programme of Community Pharmacies in Finland.

Safe pharmacy: An initiative to increase access to domestic abuse services via community pharmacy

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Background: One in four women in Ireland who have been in a relationship have been abused by a current or former partner¹. National strategy² aims to ensure that victims/survivors of domestic violence have immediate access to the safety, support and advocacy they need.

Purpose: The Safe Pharmacy Initiative aimed to help those experiencing domestic abuse and coercive control to access information, contact details and a safe, private space in their local community pharmacy to contact specialist support services in their locality.

Method: The Safe Pharmacy Initiative was developed as follows:

- Creation of a strategic collaboration between the Irish Pharmacy Union (Irish representative body for community pharmacy), An Garda Síochána (the Irish police service), the Health Service Executive (HSE) and Safe Ireland (an Irish government funded charity committed to creating safety for women and children);
- Collaboration between the four national stakeholder groups on a shared vision and common goal;
- Development of a pathway for access to local supports through community pharmacy;
- Training of key staff through online webinars, information leaflets and articles published in a national pharmacy journal;
- Design of an easy to recognise logo that could be placed in the pharmacy window to identify the pharmacy as a Safe Pharmacy; and
- Implementation of public awareness campaign which included press briefings, creation of a promotional

video, development of a public facing webpage, radio and press interviews.

Results:

- 57% of all community pharmacies across the 26 counties of Ireland signed up to the initiative;
- All who signed up to the initiative registered as a Safe Pharmacy and nominated a Safe Pharmacy Champion;
- The Safe Pharmacy materials (poster/logo) were displayed in the pharmacy windows;
- Articles published in the national pharmacy journal were circulated to readership of 16,000 including community pharmacists and their teams, Senior Department of Health and HSE stakeholders, regulatory bodies, politicians and health journalists; and
- The public awareness campaign received a high volume of traction across traditional news media as well as across all key social media platforms:
 - 47 mentions in news articles
 - 17 mentions on radio channels
 - 78,257 Twitter views, 1,064 likes, 479 retweets, 35 comments
 - 30,523 Facebook views, 135 likes, 235 shares, 20 comments
 - 25,200 Instagram views, 277 likes, 4 comments

Conclusions: Safe Pharmacy has increased visibility of domestic abuse and coercive control in communities throughout Ireland. The requirement of participating pharmacies to register, appoint a champion and complete training created a standard. The governance structure facilitated inclusion of all pharmacies, domestic violence services and Garda stations throughout the country. This ensured transparency, accountability, responsiveness and participation. The simple model facilitated replication in communities nationwide. Future work will focus on further upskilling of community pharmacy staff through implementation of an expanded, accredited training programme.

What do 1000 Indonesians living during pandemic say about telepharmacy services?

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Background: The Covid-19 pandemic has leveraged the use of telepharmacy to cope with limited patient mobility. Current knowledge has shown the potential of telepharmacy for delivering remote pharmaceutical care procedures. However, there is limited evidence regarding general public readiness and acceptance of telepharmacy to the extent it can be a sustainable service in community pharmacy after the pandemic crisis.

Purpose: This study evaluated the general public readiness index and acceptance level towards telepharmacy services in Indonesian community pharmacies.

Method: A cross-sectional online survey was conducted to general public in East Java, the second biggest province in Indonesia which had been severely hit by the Covid-19 pandemic. The survey was conducted during the lockdown period between May and June 2021. A pre-tested self-administered questionnaire was used to collect data. The questionnaire adopted Technology Readiness and Acceptance Model (TRAM) as the construct measuring individual perception of the technology, the value of technology and the ease of its use. Descriptive statistics and Chi Square test were used to calculate the willingness to use telepharmacy services.

Findings: There were 1,111 adolescents participated in the survey, most of which were female (72%), aged 17-24 (63%), and more than 66% never used or never heard of telepharmacy before. The calculated index reflecting High Technology Readiness (3.42) with a feeling of optimism about the potential of the service was the highest score. Likewise, the score for acceptance towards the value and ease of use was high (82.59) with 94% of respondents were willing to use telepharmacy. Patient counselling was the most favorable service selected by respondents (78%). There was a significant correlation between willingness to use and general public readiness and acceptance level ($p < 0.05$).

Conclusion: Telepharmacy can be a promising platform of service in community pharmacy. Indonesians had positive perceptions about the service and were willing to use it after pandemic. Despite its potential implementation, this study did not investigate the viability of telepharmacy which has been critical yet underexplored in the current debates about future pharmacy services.

Open door - Implementation of a pharmaceutical indication and follow-up program in the community pharmacy context

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RFWE-01 - Rapid Fire Session Wednesday, M1-M2, September 27, 2023, 11:00 AM - 12:30 PM

Background: Pharmacies are often the gateway to the healthcare system and are ideally placed to meet the needs and expectations of people with minor ailments. Guidance and intervention tools can be useful to assist pharmacy teams in the evaluation and follow-up of people who present with symptoms associated with acute or non-acute disease, constituting an opportunity to register and evaluate the effectiveness of pharmaceutical interventions.

Purpose: 1. Describe the design process and implementation of the "Open Door" service in a group of community

pharmacies; 2. Characterize the participants involved in the service and evaluate the effectiveness of the intervention.

Method: 1. The Open Door service was designed following the experience acquired so far in the implementation of pharmaceutical indication and follow-up programs, mainly focused on the acute respiratory infections' area, as well as the review of the applicable literature. 2. Preliminary data from participants included in the service since its launch, from March 31 to April 28, 2023, has been analyzed in Excel® and Salesforce HealthCloud®. The information was collected in Salesforce HealthCloud®, in each pharmacy involved, through customized forms.

Results: The Open Door service consists of an initial evaluation, with characterization of symptoms and indication of pharmacological and/or non-pharmacological measures (t0) and 2 follow-up contacts after approximately 7 days (t1) and 14 days (t2) in the case of acute situations and 1 month (t1) and 3 months (t2) for non-acute situations. Training for the implementation of the service was made available to 140 pharmacies. In the referred period, 121 persons were flagged to the service in 31 pharmacies, and until April 28, 54 persons completed the program. Most of the people identified were over 50 years of age (69.4%; n=84) and were female (68.6%; n=83). Of the 121 persons for whom the initial evaluation was completed, most reported having acute symptoms (81.0%, n=98) and the main situations analyzed corresponded to respiratory (26.6%, n=33), dermatological (13.7%, n=17), gastrointestinal (12.9%, n=16) and cardiovascular (11.3%, n=14) areas. Most people were accompanied, in the management of the reported symptoms, by the pharmacist (48.9%), followed by the General Practitioner (19.9%). For the 54 persons who completed the program, the vast majority (87.3%; n=48) reported improvement of symptoms and for 6 (10.9%) the symptoms remained the same; the vast majority (90.9%; n=50) also confirmed still being on treatment (pharmacological and/or non-pharmacological) as indicated by the pharmacist, with a few (9.1%; n=5) having started but meanwhile having discontinued the indicated treatment; 4 of the participants reported having a medical consultation during the follow-up period. On a scale from 1 to 10, where 1 means "No Impact" and 10 means "Significant Impact", 28 (90.3%) of the people who responded evaluated the contribution of the program provided to the management of their health problem between 8 and 10, with an average value of 8.7.

Conclusion: The implementation of a pharmaceutical indication and follow-up service, with registration and monitoring, is feasible, allowing the pharmacist to assess the effectiveness of the intervention.

The role of the community pharmacist in the prevention, detection and control of Hypertension.

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Background: Cardiovascular diseases are the main cause of mortality worldwide and in Portugal. Reducing the risk factors associated with them is an important factor in preventing the occurrence of this type of disease.

Purpose: Assessment of patients with risk factors without diagnosis of arterial hypertension; Identification of patients with uncontrolled arterial hypertension; Assessment of hypertensive patients and associated comorbidities; Assessment of compliance to therapy.

Methods: This study took place during June 2022 and involved two interventions:

- Promoting health literacy among users with cardiovascular risk, acting to raise awareness of an earlier diagnosis (dissemination of communication materials in pharmacies and social media);
- Cardiovascular assessment based on the measurement of blood pressure, weight and body mass index, and implementation of a questionnaire aimed at assessing:
 - o Patient's blood pressure profile;
 - o Frequency of blood pressure measurements;
 - o Place and how the blood pressure measurement is performed;
 - o Frequency of non-adherence to antihypertensive therapy.
 - o The patients had their blood pressure measured twice, with a 10-minute interval between both times.

Data were collected using a Microsoft® form developed for this purpose (Figure 3), and analysed using the Excel® software.

Results: Of the pharmacies involved, 100 involved 2021 people, of whom 62% (n= 1254) were female, 66% were aged between 45 and 65 years and 38.3% were smokers. Of the individuals assessed, 72% were hypertensive, 95% were taking antihypertensive medication and 43% were overweight. Besides hypertension, 30% of the patients are diabetic, 9% had a previous stroke and 6% had a myocardial infarction. Of the patients involved, 46% perform the blood pressure measurement in the pharmacy, in the sitting position (98%) through an arm meter (92%). As for the frequency of measurement, 33% of patients measures their blood pressure between 1 and 2 times a month and 54% of patients perform a blood pressure measurement. Of the patients assessed, 16% did not comply with the therapy in the last week before the intervention, and 28% in the last month. We verified that 26% of non-hypertensive patients had high blood pressure values (> 140/90 mm/Hg) and 51% of hypertensive patients had uncontrolled values.

Conclusion: Pharmacies should intervene to improve hypertensive patients' knowledge of their disease, alert them to the importance of monitoring and taking the correct medication, thus contributing to reducing the morbidity and mortality associated with this disease. The pharmacist can contribute to assist the assessment of the therapeutic results by performing blood pressure measurement in pharmacies, teaching patients how they can notice the evolution of the improvement in values, ensuring adherence to therapy.

Towards greener pharmacy: The French chamber's roadmap

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RFWE-01 - Rapid Fire Session Wednesday, M1-M2, September 27, 2023, 11:00 AM - 12:30 PM

Environmental issues are becoming more pressing and pharmacists must take their part in this societal transition. Ambitious legislative texts at both European and French levels (European Green Deal - French Anti-Waste and Circular Economy Law) prompt healthcare actors to act to reduce the environmental impact of their activities. In this context, the French Chamber of Pharmacists developed a roadmap to (1) set an internal CSR strategy and (2) help pharmacists transition towards greener and more sustainable practices in the different pharmacy settings.

The French Chamber aims at accompanying pharmacists in their ecological transition.

The CSR strategy concerns the French Chamber as an organization and its functioning. This strategy will cover different aspects: redesign of the premises, design of a set of ecofriendly actions at work, a digital sobriety plan, a responsible purchasing policy and a sustainable mobility plan.

As far as our external strategy is concerned, the objective is to raise pharmacists awareness around environmental issues and to promote good practices and concrete tools using our communication channels. We will also make concrete recommendations for the different pharmacy settings, i.e. around the good use of medicines, waste management and eco-toxicity of medicines. The reflection also includes how to integrate these issues to the pharmacy studies.

We will present the first outcomes of this action plan in September in Brisbane.

New roles of pharmacists in France : Vaccination by community pharmacists

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RFWE-01 - Rapid Fire Session Wednesday, M1-M2, September 27, 2023, 11:00 AM - 12:30 PM

The role of French community pharmacists in the field of vaccination has increased in the past half decade. It increases the vaccination coverage rate by simplifying the patients' journey within the health system.

Following a three-year experimentation, a law included immunization against flu to the core missions of community pharmacists in France in December 2018. Since 2019, France rolled out pharmacy-based flu vaccination at national level. During the COVID-19 crisis, pharmacists have been allowed to prescribe and administer COVID-19 vaccines in community pharmacies.

In January 2022, the French National Authority for Health recommended that pharmacists, nurses and midwives be authorized to prescribe and administer certain non-living vaccines to patients over 16 years old (including vaccines against diphtheria, tetanus, pertussis, poliomyelitis, HPV, hepatitis A and hepatitis B).

In April 2022, regulatory texts extended the list of vaccines (all non-living vaccines) community pharmacists are allowed to administer beyond seasonal flu and COVID-19 and the target population (Adults and minors aged 16+ targeted by vaccination recommendations).

In addition, between 2021 and 2023, the possibility to administer vaccines has been extended to hospital pharmacists, clinical biologists, pharmacy students (6th year) as well as pharmacy technicians (not yet applicable).

In 2022, 11.4 millions of flu vaccines were administered by community pharmacists in France (50% of flu vaccinations). Nearly 24 million vaccinations against COVID have been carried out in pharmacies since the start of the health crisis.