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PHARMACY RESEARCH REPORT

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COMPENDIUM OF ABSTRACTS

PERSIDANGAN KEBANGSAAN
PENGUATKUASAAN
JENAYAH FARMASEUTIKAL
NATIONAL CONFERENCE ON PHARMACEUTICAL CRIME ENFORCEMENT

PHARMACY RESEARCH REPORTS

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Editorial Address:
Editor in Chief
Pharmacy Research Reports
Pharmacy Policy and Strategic Planning Division
Pharmaceutical Services Programme
Ministry of Health Malaysia
Lot 36, Jalan Prof Diraja Ungku Aziz, 46200 Petaling Jaya, Selangor, Malaysia
Tel : (603) 7841 3200
Email : rndfarmasi@moh.gov.my
Website : https://www.pharmacy.gov.my / https://research.pharmacy.gov.my

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RISE 2026: Advancing Pharmacy Enforcement Through Research

The Research and Development (R&D) and Quality Improvement Initiatives Symposium for Pharmacy Enforcement (RISE) 2026 is organised by the Pharmacy Enforcement Division, Pharmaceutical Services Programme, Ministry of Health Malaysia (MOH). It is held as a scientific symposium in conjunction with the National Conference on Pharmacy Crime Enforcement (NCPCE) 2026 and the 50th Anniversary of Pharmacy Enforcement in Malaysia.

The symposium provides a national avenue for presenting research that strengthens pharmacy enforcement through scientific evidence and innovation. It reflects the continued effort of the Division to build a research-driven culture that supports evidence-based policymaking, operational excellence, and organisational development.

RISE 2026 is organised around three tracks: two research and development tracks, the R&D Poster Competition and the R&D Poster Colloquium, together with a Quality Improvement Initiatives (QIIs) track. The tracks bring together pharmacy enforcement officers from across Malaysia to examine current challenges in pharmaceutical regulation and enforcement, encouraging the exchange of scientific knowledge, collaboration among researchers and practitioners, and the translation of findings into practical solutions that improve enforcement effectiveness and protect public health.

This Pharmacy Research Report compiles the research abstracts accepted under the two R&D tracks, while the QIIs abstracts are published separately in the Journal of Pharmacy Quality Improvement Initiatives (PharmQIIs). The report records the scientific evidence presented at RISE 2026 as a reference for future studies and supports the continued development of enforcement approaches against the changing landscape of pharmaceutical crime. Through these contributions, the Division continues to place scientific evidence at the centre of its strategic decisions and regulatory practice.

Objectives

1. To foster a culture of research and development (R&D) and quality improvement initiatives (QIIs) among pharmacy enforcement officers.

2. To provide a platform for sharing knowledge, experience and best practices in pharmacy enforcement to strengthen operational effectiveness.

3. To encourage and recognise R&D and QIIs projects that contribute to excellence and the transformation of pharmacy enforcement.

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R01

A Qualitative Study Exploring and Understanding Non-Compliance Towards Pharmacy Law Among Repeat Offenders in Sabah, Malaysia (SECond)

Hii Lu Yien[1], Fashihatul Aini Affandi[1], Loh Tan Yin[1], Mah Soo Ying[2], Wong See Wan[3], Teong Win Zee[4], Chew Chii Chii[5]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Sabah State Health Department, Ministry of Health Malaysia

[2]Sultanah Aminah Hospital, Johor, Ministry of Health Malaysia

[3]Pharmacy Management Branch, Pharmaceutical Services Division, Sabah State Health Department, Ministry of Health Malaysia

[4]Clinical Research Centre, Queen Elizabeth Hospital, Kota Kinabalu, Sabah, Ministry of Health Malaysia

[5]Clinical Research Centre, Raja Permaisuri Bainun Hospital, Ipoh, Perak, Ministry of Health Malaysia

Abstract

Introduction: The sale of unregistered pharmaceuticals and unnotified cosmetics is a persistent challenge in Sabah, Malaysia, worsened by cross-border smuggling. Despite stringent enforcement control, recidivism remains high; 15% of prosecuted cases (2017–2024) involved repeat offenders.

Objective: This study explored the phenomenon of non-compliance towards pharmacy law among repeat offenders in Sabah, investigating the reasons driving their repeated sale of unregistered pharmaceuticals and unnotified cosmetics, alongside their perspectives on the effectiveness of enforcement mechanisms.

Methods: A qualitative study was conducted among repeat offenders in Sabah using purposive sampling. To ensure compliance with the Personal Data Protection Act 2010 and prevent conflicts of interest, invitation letters were sent to the repeat offenders to obtain primary consent for sharing their basic information. Independent data collectors obtained verbal informed consent and conducted audio-recorded, in-depth telephone interviews. Anonymised transcripts were evaluated by pharmacy enforcement officers via inductive thematic analysis until data saturation was achieved at the sixth interview.

Results: Analysis identified four key drivers of recidivism: (i) economic necessity for financial survival, (ii) community obligation to provide affordable medicines in rural areas, (iii) supply chain opacity involving misleading wholesalers, and (iv) regulatory normalisation driven by confusion and the visible impunity of unlicensed competitors. Participants reported perceived bias in enforcement, noting that licensed premises face disproportionate targeting compared to unregulated sellers. While punitive measures eventually deter offences, they cause severe financial and psychological distress. Consequently, participants advocated for a progressive approach prioritising education where prosecution is only pursued after formal warnings.

Conclusion: Multiple systemic factors contribute to recidivism, rather than malicious intent alone. Since current punitive measures are perceived as inequitable, a multi-pronged strategy combining progressive enforcement, targeted education, and upstream supplier regulation is recommended to improve sustainable compliance.

Keywords: Qualitative study, recidivism, repeat offenders, enforcement mechanisms, pharmacy law

NMRR ID: NMRR ID-24-00147-D5N

Corresponding author: Hii Lu Yien

Pharmacy Enforcement Branch, Sabah State Health Department, Level 6, Federal House, Jalan Mat Salleh, 88590 Kota Kinabalu, Sabah

Email: luluyien@moh.gov.my

R02

Severity-Weighted Analysis of Entry-Point Screening by Enforcement Pharmacists in Labuan, 2021–2025

Tan Zhi Shan, Sujata[1], Mohd Sofian @ Awang Sofian Othman[1], Abdul Hakim Nordin[1], Siti Nadiah Dahlan[1], Koay Chin Yin[1], Siti Nur Syafiah Mohamad Khizar[1], Heriman Mahali[1], Ridhwan Abdullah[1]

[1]Pharmacy Enforcement Branch, Labuan Federal Territory Health Department, Ministry of Health Malaysia

Abstract

Introduction: Entry-point screening plays a critical role in preventing the influx of unregistered and potentially harmful pharmaceutical and related products. In Labuan, enforcement pharmacists provide technical advisory support during screening; however, the overall impact and risk profile of intercepted consignments remain under characterised. To better quantify enforcement impact beyond raw seizure counts, a Weighted Confiscation Index (WCI) was developed to incorporate both frequency and regulatory severity of intercepted consignments.

Objective: To evaluate the screening and advisory role of enforcement pharmacists at Labuan entry points from 2021 to 2024, and to quantify the severity-weighted enforcement impact using a WCI.

Methods: A retrospective analysis was conducted on screening records from cargo and courier consignments. Data included product categories, number of consignments, item counts, and enforcement outcomes. Seizure recommendation notices (SRN) were analysed at the consignment level. Product categories were grouped into controlled pharmaceuticals, non-controlled pharmaceuticals, chemicals, cosmetics, and others. WCI was calculated using a 3–2–1 risk-weighting system, where controlled pharmaceuticals were assigned a weight of 3, non-controlled pharmaceuticals a weight of 2, and lower-risk categories such as cosmetics, food products, veterinary products, and others a weight of 1. Descriptive statistics and chi-square analysis were performed.

Results: A total of 4,788 consignments were screened, with 162 (3.38%) recommended for seizure. Enforcement actions were significantly associated with courier consignments (9.95%) compared to cargo (0.25%) ($X^2 \approx 274$, $p<0.001$). Non-controlled pharmaceuticals demonstrated the highest proportion of SRN, followed by controlled pharmaceuticals, while chemical consignments, despite comprising the largest volume, were not associated with enforcement action. The total WCI was 354, with a mean weighted score of 2.19 per SRN consignment, indicating predominantly moderate-to-high regulatory concern.

Conclusion: Enforcement actions were concentrated in courier consignments involving consumer-oriented products. The WCI provides a practical framework to quantify severity-weighted enforcement impact and may inform targeted regulatory strategies at entry points.

Keywords: Enforcement pharmacists, entry point screening, seizure recommendation, pharmaceutical regulation, pharmacy

NMRR ID: NMRR ID-26-00276-MJF

Corresponding author: Tan Zhi Shan, Sujata
Pharmaceutical Services Division, Peti Surat 81736, 87027 Wilayah Persekutuan Labuan, Malaysia
Email: zstan@moh.gov.my

R03

Analysis of Fines Imposed Against the Value of Unregistered Pharmaceutical Seizures in Kuala Lumpur (2020–2022)

Muhammad Al-Wahsi Mohammad Jafri[1], Nurfarhana Miskon[1], Palani Sekaran[1], Siti Asiah Abdul Aziz[1], Mohd Fahmi Musa[2], Mohamad Kamarulzaman Mahamad Taib[3]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Federal Territories of Kuala Lumpur and Putrajaya Health Department, Ministry of Health Malaysia
[2]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Johor State Health Department, Ministry of Health Malaysia
[3]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Negeri Sembilan State Health Department, Ministry of Health Malaysia

Abstract

Introduction: The efficacy of the Control of Drugs and Cosmetics Regulations (CDCR) 1984 is often measured by its deterrent effect; however, little is known about the proportionality of judicial fines relative to the value of seized assets.

Objective: This study aimed to evaluate the fines imposed on first-time offenders under the Sale of Drug Acts (SODA) 1952 in Kuala Lumpur from 2020 to 2022, and to examine the relationship between the fine amount and the quantity of confiscated items, their monetary value, and the number of charges against the offender.

Methods: A retrospective analysis was conducted on 130 eligible datasets of guilty-plea cases sourced from the Pharmacy Enforcement Database (EDPF). Data were analysed using SPSS 29.0, employing Spearman's correlation and the Kruskal-Wallis test to identify associations between variables.

Results: The median fine imposed was RM4,800.00. A significant positive correlation was found between the quantity of items and the fine ($r=0.592$, $p<0.001$), with each additional item increasing the fine by RM82.11. The total value of items also showed a significant correlation ($r=0.477$, $p<0.001$). Conversely, the number of charges did not consistently correlate with the fine amount ($p=0.330$).

Conclusion: While quantity and value of the confiscated items are significant predictors of higher penalties, the number of charges is less influential. These findings highlight the need for optimised fine schemes to effectively deter the sales of unregistered items.

Keywords: Sale of Drug Act 1952 (SODA 1952), unregistered pharmaceutical products, judicial discretion, Control of Drugs and Cosmetics Regulations (CDCR) 1984, penalty

NMRR ID: NMRR ID-22-00301-BPQ

Corresponding author: Muhammad Al-Wahsi Bin Mohammad Jafri
Pharmaceutical Services Division, Federal Territories of Kuala Lumpur and Putrajaya Health Department, Jalan Cenderasari, 50590 Kuala Lumpur
Email: alwahsi@moh.gov.my

R04

Amendments to Malaysia's Poisons Act 1952: A Comparative Document Analysis Using the Health Policy Triangle Framework (Act-mAP)

Nurhuda Mohamed Kamil[1], Siti Hajar Maryam Dhuoha Mohd Noor[1], Joseph Oyol Modili[1], Zulkefli Mohamad[1], Nurul Fartini Ramezan[1]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Sabah State Health Department, Ministry of Health Malaysia

Abstract

Introduction: Malaysia's Poisons Act 1952 is the primary legislation for medicinal control. However, digital health advancement and complex pharmaceutical supply chains exposed significant regulatory gaps. The Poisons (Amendment) Act 2022 was enacted to modernise this system, yet framework-based analyses of these legislative changes remain limited.

Objective: To systematically compare the legislative and regulatory changes before and after the Poisons (Amendment) Act 2022 using the Health Policy Triangle (HPT) framework.

Methods: A comparative document analysis guided by scoping review principles was conducted. Grey literature (government portals, parliamentary records, the Pharmaceutical Services Programme website and advanced Google searches) was searched using search terms related to the Poisons Act 1952 and its amendments from 2010 to 2026. Documents relevant to legislative reform and regulatory governance were included. Data were extracted and thematically analysed using the HPT domains: context, content, actors and process.

Results: Of 1060 documents screened, 34 were included. Analysis revealed substantial shifts across all HPT domains. Pre-amendment, the focus was on conventional poison control within physical healthcare settings and paper-based systems. Post-amendment, the context expanded to address illegal poison distribution, digital pharmaceutical markets, nicotine-related public health concerns and the need for stronger inter-agency enforcement. In content domain, the amendment broadened enforcement authority, strengthened investigation and seizure powers, recognised electronic prescriptions and digital records, restructured licensing and pharmacist accountability, enabled administrative directives including the expansion into nicotine control and veterinary antimicrobial stewardship, and increased penalties. Actor involvement evolved from a health-centric to a multi-agency model spanning enforcement agencies, professional bodies, legislative institutions and media. The process moved towards an iterative, implementation-oriented governance model.

Conclusion: Comparison of the Poisons Act before and after the 2022 amendment using the HPT framework demonstrated transition towards broader enforcement powers, digitalisation and multi-agency governance. Despite alignment with digital healthcare developments, evaluation of enforcement effectiveness and inter-agency coordination remains important for regulatory strengthening.

Keywords: Poisons Act, regulatory modernisation, digitalisation, pharmaceutical governance, Malaysia

NMRR ID: NMRR ID-26-00949-ZOZ

Corresponding author: Nurhuda Mohamed Kamil
Pharmacy Enforcement Branch, Sabah State Health Department, Level 6, Federal House, Jalan Mat Salleh, 88590 Kota Kinabalu, Sabah
Email: nurhuda@moh.gov.my

R05

A Legal Study of Adequacy of the Poisons Act 1952 in Regulating the Sale and Supply of Cough Medicine Containing Diphenhydramine

Muhammad Kamil Khalid[1]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Kedah State Health Department, Ministry of Health Malaysia

Abstract

Introduction: Due to the abuse potential of cough medicine containing diphenhydramine (CMCD), special audits are conducted regularly on the wholesale and retail sales records of CMCD in community pharmacies and clinics. However, the discrepancies found in the audit are difficult to translate into successful prosecution of suspected diversion. Vague legal interpretation on dispensed medicine and decentralised sales records complicate enforcement's effort to differentiate between genuine supply for medicinal purposes and diversion.

Objective: This study aims to analyse the adequacy of Poisons Act 1952 (amended 2022) and its Regulations to counter diversion of CMCD, referencing New Zealand's corresponding regulatory framework and to recommend potential improvements on Poisons Act 1952.

Methods: A qualitative study combining comparative legal analysis and semi-structured interviews involving community pharmacist and enforcement officer. Legal texts of various jurisdictions were scoped using keywords like diphenhydramine and poison. Most Similar Systems Design (MSSD) was employed and ultimately New Zealand's Medicines Act 1981 and Medicines Regulations 1984 were selected and analysed according to domains like CMCD classification, monitoring and legal clarity. The interviews were transcribed verbatim and translated into English and subsequently coded and analysed in distinct domains relevant to adequacy of Poisons Act 1952.

Results: The interviews found that significant loopholes remain in Malaysia's existing regulatory framework, including vague statutory definitions, inadequate record-keeping requirements, and limited enforcement mechanisms. Comparative analysis outlines New Zealand's unique and precise approach to these problems, which includes a clearer classification system, quantitative dispensing limits, and centralised electronic monitoring mechanisms.

Conclusion: New Zealand's approach complements our current regulatory framework due to great similarity in our systems. Malaysia may consider amending the statutory definition of "dispensed medicine," establishing risk-based quantity controls, migrating to a centralised electronic monitoring system, introducing clear statutory standards such as "fit and proper person" requirement alongside structured enforcement guidelines to effectively prevent the misuse and diversion of CMCD.

Keywords: Legal, diphenhydramine, sale, Malaysia, Poisons Act 1952

NMRR ID: NMRR ID-25-04094-POK

Corresponding author: Muhammad Kamil bin Khalid
Cawangan Penguatkuasaan Farmasi, Bahagian Perkhidmatan Farmasi Negeri Kedah, Jalan Kuala Kedah, Simpang Kuala, 05400 Alor Setar, Kedah
Email: muhd.kamil@moh.gov.my

R06

A Reassessment on Online Illicit Product Advertisement Detected During Operation Pangea 2020–2023

Loo Shing Chyi[1], Alyia Farhana Muhadzir[1], Alvina Kueh Li Wen[1]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Sarawak State Health Department, Ministry of Health Malaysia

Abstract

Introduction: Online platforms have become major channels for the illegal promotion of unregistered health products, posing escalating risks to public safety. Limited evidence exists regarding the current status and sustainability of advertisement removal actions, particularly in Sarawak.

Objective: This study aimed to reassess the status of illicit product advertisements reported during Operation Pangea.

Methods: A cross-sectional study was conducted, with data extracted from the Pangea report from 2020 to 2023 and organised into data collection forms. Universal sampling methods were employed and included all screened advertisements recorded. All preserved links were reassessed to confirm the availability of the advertisements, and comparisons were made with the recorded outcomes. Chi-square test was used to identify factors associated with action taken on the advertisements screened.

Results: Of 1,001 advertisements screened, the reported removal rate was 75.1%, compared with 76.8% upon reassessment. A significant difference was observed between the two datasets ($p<0.001$). Discrepancies occurred in 11.1% of cases, including 4.7% of advertisements recorded as removed but still accessible online. Platform performance varied widely: YouTube showed persistently low compliance (>75% advertisements active), whereas Lazada achieved full removal of flagged advertisements. Slimming products (17.8%), sexual stimulants (14.0%), and dermatological agents (10.7%) were the most frequently promoted categories.

Conclusion: Although overall removal rates appeared high, the observed discrepancies and content recovery highlight gaps in online enforcement sustainability and platform accountability. Strengthened digital surveillance, enhanced multi-agency collaboration, and improved public education are needed to address persistent risks posed by illicit online health product promotions.

Keywords: Online advertising, illicit products, Operation Pangea, removal rate, discrepancy rate

NMRR ID: NMRR ID-23-03568-UOQ [IIR]

Corresponding author: Loo Shing Chyi
Pharmacy Enforcement Branch, Sarawak State Health Department, Lorong Diplomatik 3, Petra Jaya, 93050 Kuching, Sarawak, Malaysia
Email: shingchyi@moh.gov.my

R07

Knowledge, Attitude and Practice of Community Pharmacists in Terengganu Towards Medicines Advertisements Legal Requirements

Nurul Fatimah Sulaiman[1], Nor Aishah Abdul Manam[1], Low Hui Xin[1], Mohd Shafiq Firdaus[1], Nurin Fatini Ghazali[1], Nor Samira Talib[2]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Terengganu State Health Department, Ministry of Health Malaysia

[2]Pharmacy Management Branch, Pharmaceutical Services Division, Terengganu State Health Department, Ministry of Health Malaysia

Abstract

Introduction: Knowledge and compliance of community pharmacists (CP) in medicine advertisements legal requirement (MALR) is important to demonstrate their professional practices. In 2021 and 2022, Terengganu only achieved 82% and 87% adherence to MASA respectively (>90% standard set by PED) which may be attributed to challenges such as inconsistent interpretation of regulations by CP.

Objective: This study was conducted to assess the knowledge, attitude and practices (KAPs) among community pharmacists towards MALR and to identify associations between subjects' KAP level and demographic profiles.

Methods: This cross-sectional survey was conducted from January to June 2023 involving all community pharmacists in Terengganu using a face-validated, self-developed questionnaire comprising 27 questions. Questionnaires and consent forms were given to the consented participants and collected during annual premise inspection. The overall KAPs of the participants were analysed using the sum score of each outcome based on Bloom's cut-off point (good: >80%, moderate: 60-79% and poor: <59%). Data were analysed using descriptive and nonparametric chi-square test (SPSS v.27) with $p<0.05$ was considered statistically significant.

Results: Of 93 participants, 73.1% were females, median age of 30 years (IQR:7) and median duration of practice was 4 years (IQR:7). The median score for knowledge, attitude and practice was 8, 7 and 5 respectively which translated to having moderate knowledge, positive attitude and good practice. There was no association between the level of KAPs with the demographic variables except gender. Male participants tended to have more negative attitude towards the current legislation compared to their counterpart ($p<0.01$).

Conclusion: The overall KAPs of the study population is fair, reflecting good practice and positive attitude but notable knowledge deficit. Continuous intervention including education workshops and constructive feedback on strengthening policies can be established in order to minimise the knowledge-practice gap and increase adherence towards MALR.

Keywords: knowledge, attitude, practice, community pharmacists, medical advertisements

NMRR ID: NMRR ID-22-00150-QRQ

Corresponding author: Low Hui Xin
Bahagian Perkhidmatan Farmasi Terengganu, Tingkat 8 Menara Yayasan Islam, Jalan Sultan Omar, 20300 Kuala Terengganu.
Email: lowhuixin@moh.gov.my

R08

A Comparison of Unregistered Traditional-Herbal Versus Unregistered Modern Medicines in State of Pahang, Malaysia

Khairul Naim Zainal Abidin[1], Nurul Amira Zunaidi[2], Muhammad Nasyaruddin Abd Manaf[3], Muhammad Hafrizan Hassan[1], Mohd Shaiful Mokhtar[1], Nur Salwani Rosely[1], Ikhwan Yuslim Zailani[1], Mohd Khairul Anuar Mahusin[1], Muhammad Ammar Abdullah[1], Muhammad Fakhrul Hisyam Mohd Nasir[1]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Pahang State Health Department, Ministry of Health Malaysia

[2]Hospital Tengku Ampuan Afzan, Pahang, Ministry of Health Malaysia

[3]Pharmacy Enforcement Division, Ministry of Health Malaysia

Abstract

Introduction: Unregistered medicines, both traditional-herbal or modern medicines in Malaysia pose a significant public health threat due to the risk of adulteration with Scheduled Poisons. Currently, the prevalence of unregistered medications sold in commercial premises in Malaysia is estimated at 2.95%.
Objective: This study explored the adulteration status and predictors of adulteration among unregistered traditional-herbal and unregistered modern medicines confiscated in Pahang, Malaysia.
Methods: A retrospective cross-sectional study analysed 2023–2024 data from the Sistem Data Penguatkuasaan Farmasi (eDPF) for confiscated items of traditional-herbal unregistered medicines (n: 777) and unregistered modern (n: 721). Data were assessed using descriptive statistics, Mann-Whitney U tests, Chi-square tests, and multivariable binary logistic regression. Convenience sampling applied during data collection.
Results: Majority of confiscated items tested positive for adulteration (56.5%). Confiscated unregistered modern medicines showed a significantly higher adulteration rate (70.0%) than traditional-herbal items (43.9%) ($p<0.001$). Adulterated items were associated with a lower median value than their non-adulterated counterparts (RM73.50 vs. RM112.00, $p<0.001$). Regression analysis identified medicine type and location as key predictors: traditional medicines had 81% lower odds of adulteration than modern ones (OR=0.19, 95% CI [0.15, 0.25], $p<0.001$), while rural seizures had 8.83 times higher odds of adulteration than urban ones (OR=8.83, 95% CI [6.76, 11.55], $p<0.001$).
Conclusion: Unregistered medicines in Pahang carry a high adulteration risk. Targeted enforcement in rural areas and expanded public health campaigns regarding illicit modern pharmaceuticals are urgently needed.
Keywords: adulterated medicine, herbal medicine, herbal vs modern medicines, predictors, unregistered medicines

NMRR ID: NMRR ID-25-00432-PIQ
Corresponding author: Khairul Naim bin Zainal Abidin
Pharmacy Enforcement Branch, Pahang State Health Department, Jalan IM 4, Bandar Indera Mahkota, 25582 Kuantan, Pahang, Malaysia
Email: khairul.naim@moh.gov.my

R09

Development and Validation of a Questionnaire for Healthcare Personnel in Perlis on Knowledge Towards Registered Medicinal Products

Gwee Zi Yan[1], Choy Wang Lynn[1], Amira Mohamad Jelani[1], Goh Ming Yi[1], Nurul Syafini Arbaen[1], Muhammad Fathi Aizad Mahmud[1], Sasidharan Nair Raman[1], Mohd Shainol Azmar Kassim[2], Soo Pei Pei[2], Ng Yit Han[3]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Perlis State Health Department, Ministry of Health Malaysia
[2]Pharmacy Practice & Development Branch, Pharmaceutical Services Division, Perlis State Health Department, Ministry of Health Malaysia
[3]Department of Social and Preventive Medicine, Faculty of Medicine, Universiti Malaya

Abstract

Introduction: In Malaysia, all medicinal products are compulsory to be registered with the Ministry of Health (MOH). Yet, the increasing prevalence of unregistered medicinal products globally threatens public health. Healthcare personnel play a critical role in ensuring all medicinal products used in their setting are registered and obtained from reliable sources.
Objective: To develop and validate a questionnaire to assess the knowledge of healthcare personnel in Perlis towards registered medicinal products.
Methods: A four-phase approach was adopted: (1) item development through literature review and expert consultation; (2) content validity evaluation by six experts; (3) face validity by healthcare personnel; and (4) reliability testing & factor analysis. Acceptable criteria for exploratory factor analysis included a KMO value ≥0.5, a significant, Bartlett's test of sphericity ($p<0.05$), factor loadings ≥0.3 for item retention, and Cronbach's alpha ≥0.5 for internal consistency. Data were analysed using Jamovi software.
Results: A preliminary 30-item knowledge questionnaire was developed in English and Malay. Linguistic accuracy was reviewed by two local experts. Removal of two items precipitated from content validation, whilst 28 items remained following pilot study (n=30) with face validation. One item was eliminated ahead of factor analysis. Exploratory factor analysis-initiated removal of 15 items (low or suppressed factor loadings (<0.3), negative loadings, and cross-loadings on multiple factors) and establishment of five domains: Product Registration in Malaysia, Registration Numbers & Requirements for Product Registration, Hologram Security Label, Current Requirements for SIRIM and Halal Labels, and Product Registration Categories. The final validated 12-item questionnaire was developed, demonstrated acceptable reliability across five domains (α=0.63).
Conclusion: The developed and validated questionnaire provides a novel tool to assess healthcare personnel's knowledge on registered medicinal products in future studies. It may also guide targeted training programmes by identifying knowledge gaps and improving awareness of medicine registration requirements and regulations.
Keywords: Validation, questionnaire, registered medicinal products, healthcare personnel, knowledge

NMRR ID: NMRR ID-23-01996-M0T (IIR)
Corresponding author: Gwee Zi Yan
Pharmacy Enforcement Branch, Pharmaceutical Services Division, Perlis State Health Department, 01000 Kangar, Perlis
Email: ziyan@moh.gov.my

R10

Knowledge of Registered Medicinal Products and Its Associated Factors Among the General Public in Perlis

Amira Mohamad Jelani[1], Gwee Zi Yan[1], Ruhaya Mohamad Razali[1], Muhammad Affiq Muhammad[1], Soo Pei Pei[2], Reza Danial Mas Ahmad Nasruddin[3], Chong Chun Ping[3], Ng Yit Han[4]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Perlis State Health Department, Ministry of Health Malaysia

[2]Pharmacy Practice & Development Branch, Pharmaceutical Services Division, Perlis State Health Department, Ministry of Health Malaysia

[3]Department of Pharmacy, Hospital Tuanku Fauziah, Perlis, Ministry of Health Malaysia

[4]Department of Social and Preventive Medicine, Faculty of Medicine, Universiti Malaya

Abstract

Introduction: The widespread availability of unregistered medicinal products remains a significant public health concern. Public ability to verify product registration serves as an important safeguard in protecting consumers from unsafe and counterfeit products.

Objective: This study aimed to assess the knowledge of registered medicinal products among the general public in Perlis, Malaysia, and to identify key factors associated with knowledge levels.

Methods: A cross-sectional study was conducted in public areas in Perlis from October to December 2025. Participants aged ≥18 years who understood English or Malay were recruited via convenience sampling. Knowledge was assessed using a validated 12-item self-administered questionnaire covering five domains: product registration in Malaysia; registration numbers and requirements; hologram security labels; current *SIRIM* and *Halal* label requirements; and product registration categories. *Multiple linear regression* was used to identify factors associated with knowledge level.

Results: Of 477 participants, the majority were Malay (n=444, 93%), female (n=309, 65%), and had attained tertiary education (n=308, 65%). Fewer than half (n=215, 45.1%) demonstrated a good level of knowledge (≥80%). Participants performed poorly in Domain 4 (current *SIRIM* and *Halal* label requirements) and Domain 5 (product registration categories), with median scores of 50% (IQR=100) for both. Respondents with secondary education or below scored lower than those with tertiary education (adj B=−7.21, p<0.001), whereas allied-health-related work was associated with higher knowledge (adj B=8.26, p=0.002). Compared with government employees, students (adj B=−12.66, p=0.001) and unemployed respondents (adj B=−11.54, p=0.003) scored lower. Having previously checked a product's registration was the strongest positive predictor (adj B=10.50, p<0.001).

Conclusion: Fewer than half of the public achieved good knowledge of registered medicinal products. Targeted education for lower-educated, student, and unemployed groups, alongside encouraging routine registration checking, may strengthen public knowledge and support safer medicine choices, reducing demand for unregistered products.

Keywords: Registered medicinal products, knowledge, medicine registration, public health, consumer safety

NMRR ID: NMRR ID-25-01790-ABF (IIR)

Corresponding author: Amira Mohamad Jelani

Pharmacy Enforcement Branch, Pharmaceutical Services Division, Perlis State Health Department, 01000 Kangar, Perlis.

Email: amira.mj@moh.gov.my

R11

Behaviour and Attitude Towards Dispensed Medicine Labelling Among Community Pharmacists in Penang: An Insight Exploration

Ahmad Aizat Zaini[1], Yee Lai Jiuan[1], Nazrulirwan Md Nazri[1], Mah Sue Lyn[1]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Penang State Health Department, Ministry of Health Malaysia

Abstract

Introduction: Although the Poisons Act 1952 legally mandates the labelling of dispensed medications, non-compliance remains a persistent issue among community pharmacists in Penang. A 2009 Penang-based study reported major labelling non-compliance among community pharmacies, followed by a 2013 study reporting that almost 100% of surveyed community pharmacists failed to fully comply with every labelling requirement. This trend continues notwithstanding significant evidence that labelling non-compliance contributes to medication errors and threatens patient safety, therefore necessitating deeper exploration into the underlying behavioural factors.

Objective: This study aims to identify the reasons hindering compliance and explore effective and practical measures to improve compliance towards dispensed medicine labelling among community pharmacists in Penang.

Methods: A phenomenological qualitative study was conducted using Interpretive Phenomenological Analysis (IPA). Semi-structured oral interviews were carried out with nine purposively selected community pharmacists across Penang to capture a breadth of practice perspectives, consistent with the recommended sample range for focused IPA studies with specific research questions. Verbatim transcripts were analysed to extract significant statements and develop emergent themes.

Results: Four superordinate themes emerged: external client-driven barriers, internal professional complacency, systemic constraints, and perceived consumers' safety risks. Primary barriers contributing to labelling non-compliance include customer impatience and demand for quick healthcare service, hostility regarding personal data collection, and a conflict between retail business survival and professional obligations. The study also observed an emphasis on verbal counselling and transactional efficiency, alongside embedded procedural complacency where routine labelling may be viewed as less critical to patient safety.

Conclusion: Labelling non-compliance is deeply rooted in the transactional provider-customer dynamic of community pharmacies, posing tangible risks to patient safety. To improve compliance, strategic enforcement is warranted alongside a deliberate shift towards a supportive framework emphasising technological integration through mandatory computerised labelling systems, government-led public education to normalise personal data requirements, and structured incremental financial penalties to build consistent professional discipline.

Keywords: Medication labelling, community pharmacy, dispensing practice, qualitative study, medication safety

NMRR ID: NMRR ID-25-00676-OUO (IIR)

Corresponding author: Ahmad Aizat Zaini
Bahagian Perkhidmatan Farmasi Pulau Pinang, Aras 8 Bangunan Persekutuan Jalan Anson 10400 Georgetown Pulau Pinang
Email: aizatzaini@moh.gov.my

R12

Enhancing Regulatory Knowledge Among Malaysian Business Operators: Comparative Effectiveness of Electronic Slides Against Physical Pamphlets

Loo Shing Chyi[1], Mohd Izdham Zainal[1], Leong Fei Lin[2], Aiysha Faatima Abdul Rahaman[3], Birahgahtish A/L Mariappan[4], Nurul Amirah Syahirah Anuar[5], Lavinia Kong Jin Qi[1]

[1]Pharmacy Enforcement Branch, Sarawak State Health Department, Ministry of Health Malaysia
[2]Sarikei Division Pharmacy Office, Pharmacy Enforcement Branch, Sarawak State Health Department, Ministry of Health Malaysia
[3]Sri Aman Division Pharmacy Office, Pharmacy Enforcement Branch, Sarawak State Health Department, Ministry of Health Malaysia
[4]Kapit Division Pharmacy Office, Pharmacy Enforcement Branch, Sarawak State Health Department, Ministry of Health Malaysia
[5]Limbang Division Pharmacy Office, Pharmacy Enforcement Branch, Sarawak State Health Department, Ministry of Health Malaysia

Abstract

Introduction: The increasing use of digital educational tools in enforcement activities necessitates evaluation of their practical benefits compared to conventional methods, particularly during time-constrained routine inspections.

Objective: To determine and compare the effectiveness of physical pamphlet-based and electronic slide-based education in improving knowledge and time efficiency among business operators.

Methods: A randomised controlled intervention study was conducted from March to June 2025 in Miri and Bintulu. Business operators who understood Bahasa Malaysia were conveniently sampled during routine inspections. Block randomisation assigned participants to control (physical pamphlet) or intervention (electronic slides) groups. The minimal sample size calculated was 15 participants each arm. A self-developed, validated questionnaire and data collection forms were employed to assess knowledge before and immediately after education session alongside time taken to deliver the educate business operator excluding the preparation time.

Results: Study involved 87 participants, with 38 in the control group and 49 in the intervention group, as participants were conveniently sampled during inspections, and some declined to participate after being approached. Most participants were aged 18–30 (34.4%), had secondary education (81.6%), and had no prior exposure to educational sessions (73.6%). Both physical pamphlet and electronic slide education significantly improved knowledge ($p<0.001$), with mean differences of 2.79 (95% CI: 2.25–3.11) and 2.71 (95% CI: 2.21–3.22), respectively, and no statistically significant difference was observed between groups ($p=0.284$). Physical pamphlet education required significantly less time (6.07 minutes) than electronic slide education (7.79 minutes), with a mean difference of 1.72 minutes (95% CI: 0.09–3.36).

Conclusion: Both educational sessions were effective in improving business operator knowledge. Physical pamphlets remain a fast and practical method, with comparable effectiveness to electronic slides. The use of digital educational tools should be guided by operational needs.

Keywords: Physical pamphlet, electronic slide, regulatory knowledge, business operator, pharmacy enforcement

NMRR ID: NMRR ID-25-00288-J15 (IIR)

Corresponding author: Loo Shing Chyi
Pharmacy Enforcement Branch, Sarawak State Health Department, Lorong Diplomatik 3, Petra Jaya, 93050 Kuching, Sarawak, Malaysia
Email: shingchyi@moh.gov.my

R13

Consumer Motivations and Perceived Risks of Online Purchasing for Medicinal Products in Melaka

Robin Tan Tiow Heng[1], Chiew Jia Wei[1], Rosdi Md Zin[1], Wong Yen Ni[1], Tan Jien Lee[1], Teh Xin Yi[1], Nor Azizah Abdullah[1], Aizuddin Abdul Raffar[1], Mohammad Fikkiruddin Jamsari[1]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Melaka State Health Department, Ministry of Health Malaysia

Abstract

Introduction: The online pharmaceutical market in Malaysia is expanding rapidly, raising significant safety, regulation, and consumer behaviour concerns. However, adequate studies assessing online medicinal purchasing behaviour in the country are lacking, which are crucial to help guide and strengthen regulatory frameworks.

Objective: This study aimed to examine the frequency, motivational factors, and perceived risks of purchasing medicinal products online to fill this current knowledge gap.

Methods: A cross-sectional study was conducted among 583 respondents in Melaka from December 1 to 31, 2025, using multi-stage sampling across 15 health facilities. A pretested, self-administered questionnaire underwent face validation and reliability testing (Cronbach's alpha >0.7). Motivation and perceived risk were scored using a 5-point Likert scale (1=strongly disagree to 5=strongly agree). Mean scores were clearly defined as low (1.00-2.33), moderate (2.34-3.67), and high (3.68-5.00). Data were analysed using descriptive statistics and chi-square tests.

Results: More than half of the respondents (54.9%) reported purchasing medicinal products online, primarily health supplements. Motivation was moderate (M=3.26), driven by easy access to information, discounts, and promotions. Conversely, perceived risk was high (M=3.74), notably regarding counterfeit products, purchasing unnecessary products that may worsen health, and a lack of regulatory approval. Chi-square analysis revealed significant associations ($p<0.05$) between online purchasing behaviour and higher education levels, higher monthly incomes, and residing in the Jasin district.

Conclusion: The growing adoption of online medicinal purchasing reveals a risk-benefit trade-off where convenience outweighs substantial safety concerns. Strengthened regulatory enforcement, improved consumer education, and enhanced platform accountability are essential to ensure safe online purchasing practices in Malaysia.

Keywords: Online purchasing, medicinal products, perceived risk, motivational factors, consumer behaviour

NMRR ID: NMRR ID-25-03263-BXZ

Corresponding author: Rosdi bin Md Zin
Pharmaceutical Services Division, Melaka State Health Department, Wisma Persekutuan, Jalan Business City, Bandar MITC, 75450 Ayer Keroh, Melaka, Malaysia
Email: rosdi.mz@moh.gov.my

R14

The Compliance Rate of Unlicensed Premises Selling Medicinal Products and Cosmetics in Johor: A Retrospective Study

Lee Ching Yan[1], Tang Sia Chin[1], Masliza Arip[1], Goh Seng Leng[1], Nur Faizah Fazri[1], See Sze Jia[1], Augustine Abraham A/L Alphonsoes[1], Lai Teck Peng[1], Foo Jia Yung[1]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Johor State Health Department, Ministry of Health Malaysia

Abstract

Introduction: Malaysia was reported to have a 3-5% prevalence of counterfeit medicine in 2013. Sarawak reported sales of unregistered medicine through non-pharmacy networks rather than medical clinics or community pharmacies in 2016. Regional data on the effectiveness of current control on the supply of unregulated medicinal products and cosmetics is lacking.

Objective: To assess the compliance rates of unlicensed premises in Johor, Malaysia, from Jan 01, 2019, to Dec 31, 2024, to justify the need for targeted pharmacy enforcement.

Methods: This retrospective cross-sectional study used a total population sampling method. Inspection records of Johor State Pharmacy Enforcement Branch (JPEB) active surveillance and Local Authority referrals listed 5,353 unlicensed establishments, including beauty salons, drugstores, and supermarkets across nine districts. Non-compliance by the sale of unregistered products, counterfeit medicines, unauthorised poisons, or unnotified cosmetics leads to an Unsatisfactory inspection outcome (*Tidak Memuaskan*, *Kurang Memuaskan*), reported as outlined in *Garis Panduan Pemeriksaan Premis Tidak Berlesen*. Data was anonymised and analysed using IBM SPSS, employing descriptive statistics to rank the proportions of non-compliant business types.

Results: Surveillance premises (2,790, 52.12%) were 8% more than Local Authority (2,563, 47.88%) coverage. This study found a high overall compliance rate of 94.79% exceeding the 85% benchmark set for licensed premises. Non-compliance was addressed through seizure of products (*serahan*) (93, 1.74%), and rare instances of prosecution (1, 0.02%). Warning letters against repeat offence (103, 86.55%) were issued during surveillance. A total of 1,087 products, valued at RM94,895, were confiscated. While JPEB focused on high-traffic retail outlets like grocery stores, Local Authority predominantly identified beauty service establishments. High-risk business types were cosmetic shops (0.105), medicine and grocery stores (0.082), manufacturers or distributors (0.057). The hardware industry represented the lowest-risk (0.005).

Conclusion: Maintaining high compliance and a targeted approach to high-risk business types is essential to undermine the capacity of regional supply chains.

Keywords: Legislation, drug, consumer product safety, counterfeit drugs, pharmaceutical preparations, cosmetics

NMRR ID: NMRR ID-25-03142-RFV

Corresponding author: Lee Ching Yan
Pharmacy Enforcement Branch, Johor Department of Health, Jalan Persiaran Permai, 81200 Johor Bahru, Johor
Email: l.chingyan@moh.gov.my

R15

A Retrospective Study on Offences and Characteristics of Products Detained at Selangor Entry Points

Suriana Hanim Ariffin[1], Pavindran Ravee[1], Azlinda A Samad[1], Nurul Hidayah Sheikh Abdullah[1]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Selangor State Health Department, Ministry of Health Malaysia

Abstract

Introduction: Illegal importation of pharmaceuticals is a growing concern. Data from the Pharmaceutical Services Division showed increasing detention of imported products from 2020–2024, indicating ongoing import-related offences and entry of potentially harmful products into Malaysia. Evidence in Selangor remains limited. Study on the related offences and product characteristics is important to support public safety strategies.

Objective: The aims of this study were to determine the frequency of offences related to products detained at Selangor entry points and to assess the characteristics of the detained products.

Methods: This retrospective descriptive statistical analysis was conducted using data extracted from the Enforcement Pharmacy Database System (eDPF) from 2020 to 2024. The data included all detained imports at Kuala Lumpur International Airport, Port Klang, Sultan Abdul Aziz Shah Airport, and the Pos Malaysia International Hub. Data with complete information were extracted and recorded using a data collection form before being analysed using MS Excel. Findings were presented using descriptive statistics, including frequencies, counts, and percentages, in the form of tables and charts.

Results: Initially, 11,064 products were detained at Selangor entry points between 2020 and 2024, and 1,118 with incomplete information were excluded, resulting in 9,946 products for analysis. The importation of unregistered products was the most common offence in passengers' baggage (95.01%) and cargo imports (51.16%), while importation without an import license was the most common offence in post/courier imports (37.5%). The top three categories of detained products were controlled medicines (n=4,316), cosmetics (n=2,613), and health supplements (n=1,199).

Conclusion: Within the five-year study period, the importation of unregistered products was the most common offence, while controlled medicines were the most frequently detained product category. The analysis also highlighted trends in product detention offences across different modes of importation. Strengthened strategic control measures and continuous educational efforts are needed to address this issue.

Keywords: Entry points, import, unregistered products, product detention, pharmaceutical enforcement

NMRR ID: NMRR ID-24-03333-97S

Corresponding author: Suriana Hanim Ariffin@Sukri

Cawangan Penguatkuasaan Farmasi, Bahagian Perkhidmatan Farmasi, Jabatan Kesihatan Negeri Selangor, Wisma Sunway, No 1, Tingkat M, 9 & 10, Jalan Tengku Ampuan Zabedah C/9C, Seksyen 9, 40100, Shah Alam, Selangor.

Email: suriana_hanim@moh.gov.my

R16

A Trend Study of Reported Pharmacy Law Violations: Analysing Public Complaints in Johor, Malaysia (2019–2023)

Lau Khye Tee[1], Devika Darshini Govindev[1], Nur 'Amirah Khalil[1], Rohaizan Alwi[1], Solehah Razali[1], Mohd Zaidi Abdul Malik[1]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Johor State Health Department, Ministry of Health Malaysia

Abstract

Introduction: The pharmaceutical landscape in Malaysia is regulated by the Poisons Act 1952 and the Sale of Drugs Act 1952. However, the rapid evolution of digital platforms has outpaced traditional enforcement frameworks, creating regulatory gaps in monitoring online borderless trade. This study analyses public pharmacy complaints from 2019–2023 across non-contemporary media, social media, and e-commerce platforms in Johor.

Objective: The study aims to analyse complaint trends, evaluate digital platforms' roles in facilitating specific violations (unregistered drugs, false advertising, unauthorised influencer endorsements and counterfeit drugs) and recommend improvements to address challenges in regulating pharmaceuticals online from 2019–2023.

Methods: This study employed a retrospective mixed-methods design. Quantitative frequency and temporal analyses were conducted on a dataset of 632 public complaints to identify trends. Concurrently, a qualitative thematic analysis was performed on the narrative text of these complaints to identify the mechanisms of platform-facilitated violations and underlying regulatory gaps.

Results: Out of 632 recorded complaints, non-contemporary media had the highest total volume (272). However, a sharp digital shift occurred: social media complaints surged from 1 in 2019 to 81 in 2023, overtaking traditional media. Unregistered products dominated e-commerce (75.0%) and social media (37.0%), while false advertising comprised 46.9% of social media complaints. Qualitative themes revealed that these violations exploit rapid viral dissemination, user anonymity, and algorithmic promotion to bypass regulatory channels.

Conclusion: The exponential rise in digital complaints demands a shift from reactive, traditional monitoring to proactive digital enforcement. To safeguard public health under the Poisons Act 1952 and Sale of Drugs Act 1952, Malaysia's Pharmacy Enforcement Division must implement algorithmic monitoring tools, mandate identity verification for online health vendors, and establish collaborative takedown protocols directly with e-commerce and social media platforms.

Keywords: Complaint, pharmacy enforcement, social media, e-commerce, non-contemporary media

NMRR ID: NMRR ID-25-03753-XV6

Corresponding author: Lau Khye Tee
Bahagian Perkhidmatan Farmasi Jalan Persiaran Permai, Kempas Baru, 81200 Johor Bahru, Johor Darul Ta'zim
Email: laukhyetee@moh.gov.my

R17

Trends and Regulatory Insights on Illicit Pharmaceutical and Cosmetic Imports: Evidence from Sarawak's Operation Pangea 2020–2023

Loo Shing Chyi[1], Alvina Kueh Li Wen[1], Alyia Farhana Muhadzir[1]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Sarawak State Health Department, Ministry of Health Malaysia

Abstract

Introduction: The trade of illicit pharmaceutical products and cosmetics (IPCs) poses a growing public health risk in Malaysia, driven by evolving online to offline supply chains. The Pharmacy Enforcement Branch (PEB) supports INTERPOL's Operation Pangea to curb this trade at entry points.

Objective: This study assessed the prevalence, detection–seizure ratios, and categories of IPCs identified in Sarawak from 2020–2023.

Methods: A retrospective cross-sectional study was conducted using Operation Pangea reports (2020–2023). Universal sampling included all online and entry-point screening cases, excluding incomplete records, West Malaysia imports, and passenger luggage. IPCs were defined as products or cosmetics not registered or notified with the Ministry of Health. Descriptive statistics and chi-square tests were applied.

Results: A total of 301 consignments (1,006 items) were screened, mainly via courier services (162) and in the Southern Zone (187). Overall, 281 IPCs were detected (27.9%), but only 67 (23.8%) were seized. Scheduled poisons (38.8%) and supplements (31.3%) were most commonly seized. Consignment type was significantly associated with detection (χ^2=105.00, p<0.001) and seizure (χ^2=16.43, p<0.001), with higher rates in courier shipments. The seizure–detection ratio declined from 100% (2021) to 5.3% (2023). Most seized IPCs were treatment-related (52.2%), including chronic disease medications and analgesics.

Conclusion: IPC prevalence in Sarawak imports is high, reflecting expanding e-commerce. Seizures prioritised high-risk items such as scheduled poisons, but declining seizure rates suggest inconsistencies in enforcement. The predominance of treatment-related IPCs indicates potential gaps in access to legitimate healthcare and increased reliance on illicit sources.

Keywords: Illicit pharmaceutical products and cosmetics, Operation Pangea, detection-to-seizure ratio, consignment screening, regulatory insight

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Corresponding author: Loo Shing Chyi
Pharmacy Enforcement Branch, Sarawak State Health Department, Lorong Diplomatik 3, Petra Jaya, 93050 Kuching, Sarawak, Malaysia
Email: shingchyi@moh.gov.my

R18

Anti-Money Laundering Laws and Pharmaceutical Crime in Malaysia: Assessing Legal Adequacy

Norfahmi Mohd Yusof[1], Muhammad Ihsan Norkhair[1], Khairul Anuar Abdul Karim[1]

[1]Pharmacy Enforcement Division, Ministry of Health Malaysia

Abstract

Introduction: Pharmaceutical crimes generate illicit financial proceeds that may amount to predicate offences for money laundering. Although Malaysia has enacted the Anti-Money Laundering, Anti-Terrorism Financing and Proceeds of Unlawful Activities Act 2001 (AMLA) alongside several pharmaceutical statutes, only the Dangerous Drugs Act 1952 is listed as a serious offence in its Second Schedule. Other pharmaceutical legislation enforced by the Pharmacy Enforcement Division (PED) falls outside this scheme, leaving the relationship between AMLA and sectoral pharmaceutical laws under-examined in Malaysian legal scholarship.

Objective: This study examines whether the existing legal framework adequately empowers the PED to investigate the financial dimensions of pharmaceutical crimes and identifies the statutory gaps constraining such investigations.

Methods: A doctrinal methodology was adopted, supported by library-based research and semi-structured interviews with two senior PED officers. Primary sources analysed include AMLA, the Poisons Act 1952, the Sale of Drugs Act 1952, and the Dangerous Drugs Act 1952. A comparative analysis was conducted on the United Kingdom, India, and Singapore, chosen because each has scheduled drug-related offences within its principal anti-money laundering legislation.

Results: The pharmaceutical statutes administered by the PED contain no provisions enabling money laundering investigation, and AMLA lists no offence under these statutes as a serious offence. The United Kingdom and Singapore address drug-related money laundering through general proceeds-of-crime legislation, while India directly schedules offences under its Narcotic Drugs and Psychotropic Substances Act 1985 within its Prevention of Money Laundering Act 2002, a model that most closely fits Malaysia's legislative architecture.

Conclusion: Malaysian law provides only a partial legal basis for addressing money laundering linked to pharmaceutical crimes. The study recommends that selected provisions enforced by the PED, particularly those concerning controlled substances, precursors, and falsified or substandard medicines, must be inserted into the Second Schedule of AMLA, supported by stronger inter-agency coordination.

Keywords: Pharmaceutical crime, anti-money laundering, comparative law, legal adequacy, regulatory enforcement

NMRR ID: NMRR ID-26-00719-MCD

Corresponding author: Norfahmi bin Mohd Yusof
Pharmacy Enforcement Division, Pharmaceutical Services Programme, Lot 36, Jln Profesor Diraja Ungku Aziz, Seksyen 13, 46200 Petaling Jaya, Selangor, Malaysia
Email: norfahmi@moh.gov.my

R19

Prevalence of Electronic Prescription System (EPS) Use Among Community Pharmacists (CPs) in Sarawak and Associated Factors

Loo Shing Chyi[1], Tan Meng Hsiung[1], Yii Ee Ming[1], Mas Aniza Abdullah[1]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Sarawak State Health Department, Ministry of Health Malaysia

Abstract

Introduction: The transition from paper to electronic prescriptions marks a significant shift in healthcare, with CPs playing a pivotal role in EPS implementation. Studies have shown EPS reduces medication errors and adverse drug events. Nonetheless, factors influencing EPS adoption remain underexplored. This study examines current practices and the barriers and facilitators to EPS adoption.
Objective: To determine the prevalence and associated factors of EPS use among CPs in Sarawak.
Methods: A cross-sectional study was conducted from December 2025 to January 2026 among all licensed and registered Sarawak CPs. A questionnaire based on the Technology Acceptance Model, adapted from the literature, was content-validated, pre-tested, and piloted. Internal consistency was high for behavioural intention, attitude, perceived usefulness, and perceived ease of use (Cronbach's alpha of 0.945, 0.961, 0.940, and 0.860 respectively). Convenience sampling was adopted in which questionnaire was sent to all licensed CPs in Sarawak. Data was collected via Google Forms distributed through email and WhatsApp. Responses were measured using 4- or 5-point Likert scales. Data were analysed using descriptive statistics and binomial logistic regression.
Results: Of 414 CPs invited, 282 responded (68.1%), with 47.5% being EPS users. Most respondents were from independent pharmacies (51.1%), aged ≤35 years (59.2%), and 40.8% of the CPs received <10 manual prescriptions annually. Logistic regression analysis (R^2=0.659) identified experience in using EPS (β=0.552, $p<0.05$) and readiness to adopt EPS (β=0.245, $p<0.05$) as significant predictors of EPS adoption. >50% respondents expressed concerns regarding technical issues, implementation and maintenance cost.
Conclusion: Nearly half of CPs in Sarawak has adopted EPS. Addressing technical and cost-related concerns, alongside enhancing user readiness and experience are essential to optimise EPS utilisation and its potential benefits. Future initiatives should focus on continuous training programmes, hands-on workshops, and technical support to enhance competency and confidence among CPs.
Keywords: Electronic Prescription System, community pharmacists, EPS adoption, perceived usefulness, perceived ease of use

NMRR ID: NMRR 21-1340-57970
Corresponding author: Tan Meng Hsiung
Pharmacy Enforcement Branch, Sarawak State Health Department, Lorong Diplomatik 3, Petra Jaya, 93050 Kuching, Sarawak, Malaysia
Email: meng@moh.gov.my

R20

The Perception and Acceptance of Community Pharmacists Towards the Implementation of Zoning Policy in Sarawak

Theng Wei Kiong[1], Loo Shing Chyi[1], Syahida Sarini Bolhan[1], Debbie Lee Sui Ling[1], Rachel Sii Zu Wen[1], Cannilia Anak Kerine[1], Ting Lee Chyn[1], Chieng Sying Na[1], Sharifah Husna Aqilah Syed Mohamad[1]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Sarawak State Health Department, Ministry of Health Malaysia

Abstract

Introduction: Community pharmacies serve an important role in public healthcare by delivering pharmaceutical services and patient consultations. Proper distribution of pharmacies is necessary to maintain equitable healthcare access and service quality. The absence of zoning policies in Malaysia has contributed to the concentration of pharmacies within urban settings, emphasising the need for perspectives from community pharmacists.

Objective: This study assessed the perception and acceptance of community pharmacists towards the introduction of zoning policies in Sarawak.

Methods: A cross-sectional quantitative survey was performed from March to September 2024 using a self-administered questionnaire that underwent face and content validation, pilot testing, and reliability assessment. The questionnaire demonstrated acceptable internal consistency, with Cronbach's Alpha values for perceived benefits (0.95), disadvantages (0.91), barriers and challenges (0.70), and acceptance (0.64) towards pharmacy zoning implementation. The moderate reliability of the acceptance domain (α=0.64) may reflect the multidimensional aspects of pharmacists' acceptance towards zoning policies, including professional and economic considerations. The study involved all licensed community pharmacists in Sarawak, with a required minimum sample size of 177. Descriptive statistics and multiple linear regression analyses were conducted, with p-values below 0.05 considered statistically significant.

Results: A total of 182 pharmacists participated, with more than 78% indicating that zoning policies could enhance healthcare accessibility, quality, and sustainability. Nevertheless, most respondents (80.7%) recognised challenges associated with policy design and enforcement. Despite this, 76.4% supported implementation within their practice areas, provided that minimum distance requirements (85.7%) and alignment with local healthcare demands (74.7%) were considered. Perceived benefit scores (adjusted b=0.231, p<0.001) and years of professional experience (adjusted b=0.046, p=0.012) were positively associated with zoning policy acceptance.

Conclusion: Most community pharmacists viewed zoning policies positively despite anticipating implementation-related challenges. The incorporation of minimum distance criteria and local healthcare needs are important considerations for effective policy implementation.

Keywords: Community pharmacy, zoning, accessibility, competition, sustainability

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Corresponding author: Theng Wei Kiong
Pharmacy Enforcement Branch, Sarawak State Health Department, Lorong Diplomatik 3, Petra Jaya, 93050 Kuching, Sarawak, Malaysia
Email: thengweikiong@moh.gov.my

R21

Comparative Community Pharmacy Practices in Relation to Good Pharmacy Practice Standards: A Scoping Review

Nurhuda Mohamed Kamil[1], Mahmathi Karuppannan[2], Farhana Fakhirah Ismail[2]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Sabah State Health Department, Ministry of Health Malaysia
[2]Universiti Teknologi MARA (UiTM), Shah Alam, Selangor

Abstract

Introduction: Community pharmacies (CP) are vital for safe medicine use and patient-centred care. Despite the presence of regulatory frameworks and Good Pharmacy Practice (GPP) guidelines by the International Pharmaceutical Federation and World Health Organisation (FIP/WHO), gaps in CP practice implementation and compliance remain uncertain across countries.
Objective: To compare similarities and differences between community pharmacy practices in Malaysia with those of other countries.
Methods: A scoping review was conducted following the Joanna Briggs Institute methodology using electronic databases (PubMed, Web of Science, Scopus and ScienceDirect), hand-searching of reference lists and grey literature. Studies published in English from 2015 to 2025 using search terms related to CP and GPP were included. Findings were thematically mapped to the Donabedian process domain and four roles outlined in the GPP guidelines.
Results: Of 1328 studies screened, 79 were included. Five subthemes were identified: storage and disposal practices, dispensing practices, Medication Therapy Management (MTM), counselling, and public health services. Malaysia matched Iraq, Libya and Estonia in stock monitoring, and Lebanon in improper pharmaceutical disposal. Regarding dispensing, Malaysia showed partial prescription-based antibiotic dispensing, whereas Ethiopia, Iran and Bangladesh dispensed without prescriptions. Malaysia displayed poor MTM in chronic disease management similar to Libya; the United Kingdom (UK) and Russia reported stronger adherence activities. For counselling, Malaysia demonstrated partial self-care and nutrition implementation compared to robust activities in the UK and Russia. In public health services, Malaysia showed good COVID-19 preventive measures comparable to Northern Ireland, Iraq, Estonia and Nepal. However, smoking cessation activities in Malaysia remained partially implemented compared with stronger smoking cessation involvement in Lebanon.
Conclusion: While Malaysia demonstrated comparable preventive and dispensing practices with several countries, advanced pharmaceutical care and public health services lag behind high-income countries. Strengthening pharmacist involvement through improved dispensing practices and expanded pharmaceutical care and public health services are recommended to enhance GPP standards in Malaysia.
Keywords: Community pharmacy, good pharmacy practice, GPP, regulatory, roles

NMRR ID: NMRR ID-25-01110-AAV
Corresponding author: Nurhuda Mohamed Kamil
Pharmacy Enforcement Branch, Sabah State Health Department, Level 6, Federal House, Jalan Mat Salleh, 88590 Kota Kinabalu, Sabah
Email: nurhuda@moh.gov.my

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Professional Experiences and Pharmaceutical Regulatory Literacy Self-Efficacy: A Survey of Community Pharmacists in Kuala Lumpur and Putrajaya

Amran Abu Bakar[1], Al Izham Che Izhar[1], Mohamad Haizal Lajis[2]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Federal Territory of Kuala Lumpur and Putrajaya Department of Health, Ministry of Health Malaysia
[2]Pharmacy Enforcement Division, Ministry of Health Malaysia

Abstract

Introduction: Pharmaceutical regulatory literacy encompassed the ability to access, understand and comprehend legal information to ensure compliance with regulatory requirements. This concept was newly derived from the self-efficacy literacy within educational, legal and social science behaviour models. This study provides a broad overview of the regulatory literacy across different experience cohorts of community pharmacists.

Objective: This study assessed self-efficacy in pharmaceutical regulatory literacy relative to years of work experience, the years elapsed since Pharmacy Practice Qualification Exam (PPQE) and licensee status among community pharmacists in Kuala Lumpur and Putrajaya.

Methods: A cross-sectional study was conducted using a nine-item self-administered questionnaire. The survey was distributed via email to community pharmacists registered with Pharmacy Enforcement Branch of Kuala Lumpur & Putrajaya (N=313), yielding only 70 respondents (n=70). Data were analysed using One-Way ANOVA to identify mean differences relative to the years of work experience and the years elapsed since PPQE (both categorised into 5 years or less, 6 years to 10 years, and 11 years and above), while independent t-tests compared literacy against licensee status.

Results: Observations of regulatory literacy attributes indicated that understanding regulatory information was significantly different relative to professional work experience groups (p=0.021) and the years elapsed since PPQE groups (p=0.013). While overall literacy attributes showed significant differences across professional experience groups (p=0.002), no significant mean differences were observed when compared against the years elapsed since PPQE groups (p=0.200) and licensee status groups (p=0.410). Limitation in low response rate results in low statistical power.

Conclusion: While professional experience and years elapsed since the PPQE significantly affect a community pharmacist's understanding of regulatory information, overall regulatory literacy is primarily driven by years of work experience. Nonetheless, the low response rate restricts the study's statistical power and generalizability.

Keywords: Community pharmacists, pharmaceutical regulatory literacy, legal compliance, professional experience, pharmaceutical regulatory affairs

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Corresponding author: Amran bin Abu Bakar
Cawangan Penguatkuasaan Farmasi Kuala Lumpur dan Putrajaya, Bahagian Perkhidmatan Farmasi, Jabatan Kesihatan Wilayah Persekutuan Kuala Lumpur & Putrajaya, Jalan Cenderasari 50590 Kuala Lumpur
Email: amran.ab@moh.gov.my

R23

Sentencing Regarding Unethical Supply of Diphenhydramine for Diversion Under the Poisons Act 1952 in Penang

Seow Yee Yin[1], Ong Tze Chin[2]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Penang State Health Department, Ministry of Health Malaysia
[2]Faculty of Law, Universiti Malaya

Abstract

Introduction: Unethical supply of diphenhydramine by healthcare professionals is a public health concern in Malaysia, contributing to substance abuse and pharmaceutical diversion. Despite a substantial increase in maximum penalties under Section 32(2) of the Poisons Act 1952, effective from 2023, sentencing outcomes remain minimal, failing to achieve intended deterrent and retributive objectives, as evidenced by persistent bulk diphenhydramine confiscations from unauthorised individuals during operations.

Objective: The study evaluates legal provisions for diphenhydramine diversion under the Act via deterrent and retributive justice theories, while analysing Penang's sentencing trends before and after the 2023 amendments.

Methods: This study employs a qualitative doctrinal legal methodology focusing on sentencing provisions under the Poisons Act related to diphenhydramine diversion, incorporating a comparative case study. Primary data were obtained from investigation papers in Penang and analysed comparatively, regarding sentencing patterns between pre- and post-amendment periods. Five pre-amendment cases were selected based on diversion volumes exceeding 20,000 bottles and successful prosecution, while five post-amendment cases were selected on successful prosecution due to limited available cases.

Results: Doctrinal analysis reveals legislative deficiencies, including absent legal definitions for "diversion", "abuse" and "unethical supply", and lack of statutory red-flag thresholds. The Act's consolidated penalty provision fails to differentiate between minor and serious offences, with no specific diversion control mechanisms. Case analysis shows a prosecutorial shift towards documentation violations, carrying lower penalties due to evidentiary difficulties and legal loopholes. Sentences imposed remain disproportionate, inconsistent, and insufficient as economic deterrents, lacking custodial consequences, and failing to reflect healthcare system's burden and societal harm. Lengthy enforcement undermines effective deterrence.

Conclusion: This research highlights a critical disconnect between legislative intent and judicial outcomes, attributable to legislative ambiguities, prosecutorial constraints and the absence of sentencing guidelines. Therefore, this study proposes legislative enhancements (tiered-penalties, precise definitions, sentencing guidelines), administrative controls (purchase thresholds, integrated tracking), and operational improvements (specialised training, interim injunctions).

Keywords: Unethical supply, diversion, diphenhydramine, Poisons Act 1952, doctrinal legal analysis

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Corresponding author: Seow Yee Yin
Penang State Pharmacy Enforcement Branch, Jalan Anson, 10400 Georgetown, Pulau Pinang
Email: yeeyin@moh.gov.my

R24

Personalised Cosmetics: Legal Issues and Challenges

Nur Hafizah Alwi[1], Siti Sarah Sulaiman[2]

[1]Pharmacy Enforcement Branch, Pharmaceutical Services Division, Pahang State Health Department, Ministry of Health Malaysia
[2]Faculty of Law, Universiti Teknologi MARA (UiTM), Shah Alam, Selangor

Abstract

Introduction: Personalised cosmetics are beauty products made uniquely to meet individual needs. In Malaysia, existing cosmetic regulations are mainly designed for mass-produced products and do not adequately address personalised cosmetics. Although sterility is not a general requirement for cosmetics, the absence of guidelines for on-site production increases the risk of cross-contamination and raises concerns regarding product quality, safety, and consumer protection. This regulatory gap creates significant challenges for both product safety and legal enforcement.
Objective: This study aims to examine the legal issues and regulatory challenges associated with personalised cosmetics in Malaysia.
Methods: A qualitative research design was adopted, involving library research and semi-structured interviews with six experts from the Pharmacy Enforcement Division, the National Pharmaceutical Regulatory Agency, and academia. The research instrument was developed based on study objectives, literature reviews, and expert input, and was then reviewed by four people from enforcement and academia to ensure the questions were understandable. Purposive sampling was used to select expert participants. Data were analysed using thematic analysis to identify key themes.
Results: Personalised cosmetics bring several issues, primarily due to unclear regulations because there are no specific legal frameworks for custom beauty. This led to both sellers and regulators are left in a grey area. Furthermore, without clear guideline on production controls, market surveillance, and notification procedures, it is much harder to guarantee product quality and protect consumer data privacy. Ultimately, these gaps weaken oversight and risk consumer safety.
Conclusion: In conclusion, Malaysia's current regulatory framework is insufficient to govern personalised cosmetics. This study recommends a dedicated legal framework, referencing South Korea, to clearly define personalised cosmetics, outline new notification process, and regulate personalised services. Additionally, the updated framework must ensure product quality and safety, protect customer data, and give enforcement the specific powers and provide penalty options needed to hold the industry accountable.
Keywords: Personalised cosmetics, legal issues, product safety, consumer protection, regulations

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Corresponding author: Nur Hafizah binti Alwi
Pharmacy Enforcement Branch, Pharmacy Services Division, Pahang State Health Department, Jalan IM 4, Bandar Indera Mahkota, 25582 Kuantan Pahang
Email: nur_hafizah@moh.gov.my

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Thank you for being part of this event. We hope it has been a rewarding experience for you, and we look forward to welcoming you again at our next conference!

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