

A Cross Sectional Study: Prevalence of Repeated Offences by Licensed Premises under the Purview of Pharmaceutical Services Division, Kedah

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Abstract

Introduction: The Ministry of Health Malaysia pharmacy enforcement services are responsible in ensuring that all licensed premises within their purview adhere to all rules and regulations. Warning letters issued after unsatisfactory inspection serve as an official notification to the licensed premises on the violation of the Malaysian laws on poisons and sale of drugs and related regulations.

Objective: This study aimed to describe the offences committed by licensed premises under the purview of Kedah Pharmaceutical Services Division and to evaluate the association between repeated offences and the characteristics of the licence holders.

Method: Warning letters issued to the licensed premises over a two-year period from 2017 to 2018 was retrieved and reviewed. Information about the premises, characteristics of the licence holders, and repeated offences were recorded.

Result: Out of 409 licensed premises, a total of 71 premises were issued with regulatory letters with 83 offences recorded. The most common offences in 2017 were the violations of Poisons (Psychotropic Substances) Regulations 1989 (n=22, 26.50%), specifically on Regulation 15 (n=16, 19.3%) that involved the non-compliance to the terms and conditions specified in to the Permit to Purchase and Use Psychotropic Substances (Methadone and Buprenorphine). A total of 15 (21.1%) premises were found to commit repeated offences (15 offences) in 2018 despite the issuance of warning letter in the previous year. In terms of licence type, holders of Permit to Purchase and Use Psychotropic Substances (Methadone and Buprenorphine) recorded the highest percentage (80.0%) of repeated offences. Age (p=0.001) and years of holding licence (p=0.001) had significant associations with the prevalence of repeated offence.

Conclusion: The prevalence of repeated offences in Kedah is considered low with most of the license premises being able to comply with the law during inspection the following year after receiving regulatory letters.

Keywords: prevalence, poisons, warning letters, offences, enforcement

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Introduction

The World Health Organization (WHO) defined drug regulation as a process that encompasses various activities aimed at promoting and protecting public health by ensuring the safety, efficacy and quality of drugs, as well as the accuracy of information. Medicines regulation is a key instrument employed by many governments to ensure that all these objectives can be achieved. Stringent drug regulation was introduced in many countries in the 1960s following the thalidomide disaster and had since been embraced by the industry as a commercial essential seal of safety and quality (1). Regulations are the basic devices employed by most governments to protect the public against substandard, counterfeit and low quality medicines. In Malaysia, there are five acts related to the control of pharmaceuticals that are being enforced by the Ministry

of Health Malaysia (MOH). They are the Poisons Act 1952 (PA 1952), Sale of Drugs Act 1952 (SODA 1952), Registration of Pharmacists Act 1951 (ROPA 1951), Medicines (Advertisement and Sale) Act 1956 (MASA 1956), and Dangerous Drugs Act 1952 (DDA 1952), and the related regulations (2).

The Pharmacy Enforcement Division (PED) in the MOH headquarters is responsible for the protection of the public's health by ensuring that pharmaceuticals, traditional and cosmetics that are available in the market are genuine in terms of registration and notification. It ensures that the supply, marketing, advertising and usage of the pharmaceutical products (including the medical services) comply with the provisions of legislations (3). The PED is supported by Pharmacy Enforcement Branches (PEB) under the Pharmaceutical Services Divisions in every state. The PEBs carry out intelligence activities, raids, audits on controlled medicines, licensing and inspections, prosecutions in the court, monitoring medical advertisements and conducting investigation in cases involving violation of acts in force.

Licensing is one of the main activities conducted by PEBs in every state. Licences are usually granted for a period of one year and may be renewed at the end of December every year. There are seven types of licences and permits being issued by PEBs under the Poisons Act 1952, namely Licence A, Licence B, Licence E, Permit to Purchase Store and Use of Sodium Hydroxide (abbreviated as Permit NaOH), Permit to Purchase and Use Psychotropic Substances (Methadone and Buprenorphine) (abbreviated as Permit Methadone & Buprenorphine), Permit to Purchase and Use Psychotropic Substances for Industry), and Permit to Purchase and Use Psychotropic Substances (Management of wildlife / animal). Type A Licence is issued to a pharmacist to import, store, and sale or supply registered medicines (Poisons) by wholesale and retail. Type B License is issued to a person or company to import, store and sell by wholesale specific poisons, while Licence E holders can only import, store and use Sodium Hydroxide. The Permit Methadone & Buprenorphine are specifically issued for registered medical practitioners for opioid replacement therapy (2).

Licensed premises such as pharmacies, clinics, and factories are inspected at least once per year before the licences are granted or renewed. Inspections are carried out by pharmacy enforcement officers from the PEB in every state. During the inspections, they will observe for any non-compliance to the guidelines or policies, violation of acts and regulations in terms of recording, labelling, and storage of poisons, advertisements, and non-compliance to the specific requirements of the licences or permits. The acts and regulations observed in this inspection are PA 1952, Poisons Regulations 1952 (PR 1952), MASA 1956, and Control of Drugs and Cosmetics Regulations 1984 (CDCR 1984). The results of inspections should be satisfactory before the premises can proceed with licence renewal in the following year.

When the pharmacy enforcement officers found any activity or product that is suspected to be in violation of law, regulatory letters will be issued to the licence or permit holders to inform them regarding the acts or regulations that is violated and the penalties. The licence or permit holders are required to reply to the regulatory letter stating all remedial actions that were taken to address the issue. Licence renewal will be allowed for this premise when all the remedial actions had been carried out and deemed satisfactory. Overall, regulatory letter represents the PEB's first official notification to the licensed premises upon discovering a product or activity in violation of the Malaysian laws and related regulations on the regulation of pharmaceuticals (4).

Since year 2014, the number of licensed premises that has been taken legal action by the PEB, Pharmaceutical Services Division, Kedah State Health Department increased from six premises to eight premises in 2015 and 13 premises in 2016, even though inspections were carried out routinely. Most of the offences were related to inappropriate poison storage, incomplete recording of dispensed medicines or psychotropic substances, cancellation of an entry in the register and advertisements related to certain diseases, skill or services.

To date, there is limited analysis on pharmacy enforcement offences and repeated offences. Data reported routinely was limited to the number of regulatory letters issued per year while the details of offences were not analysed. Therefore, this study aimed to describe the offences committed by licensed premises that warranted the issuance of regulatory letters and to evaluate the association between repeated offences and the characteristics of the licence holders. In this study, those receiving regulatory letter will be considered as committing an offence and if they receive another regulatory letter the following year with the same offence, it will be considered as a repeated offence. The findings of this study will be useful in designing more specific approaches to create awareness or education about the regulatory requirements to licence and permit holders. Hopefully, it can also help the MOH to determine further actions and measures to reduce repeated offences.

Method

This is a cross sectional study that analysed the frequency and types of offences recorded in the regulatory letters issued in 2017 by the Kedah PEB to the licence or permit holders under PA 1952 which included Licence A, Licence B, Licence E, Permit NaOH, Permit Methadone & Buprenorphine, Permit to Purchase and Use Psychotropic Substances (for Industry), and Permit to Purchase and Use Psychotropic Substances (Management of wildlife / animal).

All records of regulatory letters which included Warning Letters, Reminder Letters and Notices of Violation that were issued in the period from 1 January 2017 to 31 December 2017 were reviewed. All premises that received any of these regulatory letters issued by the Kedah PEB in 2017 were included in this study. Premises that cancelled their licence or permit without any replacement, and premises that ceased operation in 2017 and 2018 were excluded from this study.

A pre-designed three-page data collection form was used in this study. The first page recorded all the information regarding the premise and licence holder. Data collected include type of license, district, number of licence holders in the premise (specifically for Licence A), ownership as well as the demographic data of the licence holder (age, gender and education background). The second page recorded the date and results of the inspection, either satisfactory or unsatisfactory. The type of offences stated in the regulatory letters and the feedback stated in explanation letters from the licence holder were also recorded. Finally, the third page consists of an attachment on coding for types of licences. All these data were then transferred to Excel sheet for analysis.

The 2018 the inspection records of the included premises were reviewed and any regulatory letters issued were recorded. If they receive another regulatory letter in 2018 with the same offence, it will be considered as a repeated offence.

Data were analysed using the Statistical Package for Social Sciences software (SPSS) version 16 and Excel spreadsheet. All information gathered was coded into variables and normality of data was tested. The frequencies of offences were expressed as numbers (n) and percentage (%). Inferential statistics including independent t-test, Fischer's Exact test and Mann-Whitney U test were used to analyse the association between repeated offences and characteristics of the licence holders, with the level of significance set at $p < 0.05$.

Results

There were 409 licensed premises under the purview of PEB, Pharmaceutical Services Division, Kedah in 2017. Out of these, 71 premises were issued with regulatory letters and four types of licences or permits were involved, which were Licence A, Licence B, Permit NaOH and Permit Methadone & Buprenorphine. Regulatory letters had been issued the most to Licence A holder with 30 letters and the least to Licence B holder with only 9 letters. The number of male licence holder (86.7%) as repeat offenders was higher compared to female (13.3%). This is in sync with the higher number of male licence holders (69.0%), involved in this study compared to the number of female licence holder (31.0%). Holders of Permit Methadone & Buprenorphine (80.0%) was more prone to repeating the same offence in the following year and there was no repeated offence by Permit NaOH holders despite contributing to 18.3% of offences in 2017.

From the 71 regulatory letters issued in 2017, 83 offences were recorded. Apart from the violations of acts and regulations, there were also non-compliance to guidelines or policies and terms and conditions specified in the permits (Table 2). The most frequent offences in 2017 were the violations of Poisons (Psychotropic Substances) Regulations 1989 (26.50%), specifically on Regulation 15 (n=16) that involved the non-compliance to the terms and conditions specified in Permit Methadone & Buprenorphine. Among these, condition No. 2 which specified that permit holder have to inform and send the invoices of all Methadone and Buprenorphine purchases to the Pharmacy Enforcement Branch within 14 days upon receiving the stock was the most common (n=15). In terms of repeated offences in 2018 (15 offences), non-compliance to the condition No. 2 contributed to 10 out of 11 offences under Regulation 15. The lowest offences were under CDCR 1984 with only three offences recorded and these were related to the possession of unregistered product.

Table 3 showed the associations between repeated offences and characteristics of licence holders. There were no significant association between repeated offence and gender as well as ownership. On the other hand, the mean age of licence holders with (53.9, SD 11.77) and without repeated offence (42.4, SD 11.1) was significantly different ($p = 0.001$). Also, the duration of holding licence was significantly different

between licence holders with (median 6 years, IQR 2) and without repeated offence (median 3 years, IQR=4, $p=0.001$).

Table 1: Demographic data of licence or permit holders issued with regulatory letters in Kedah in 2017 (n=71)

Variables	Licence holders with offence in 2017 (n=71)	Licence holders with repeated offence in 2018 (n=15)
Age, year, mean (SD)	44.5 (12.3)	53.9 (11.8)
Years as licence holder, median (IQR)	4.0 (4.0)	6.0 (2.0)
Gender, n (%)		
Male	49 (69.0)	13 (86.7)
Female	22 (31.0)	2 (13.3)
Type of Licence, n (%)		
Licence A	30 (42.3)	2 (13.3)
Licence B	9 (12.7)	1 (6.7)
Permit NaOH	13 (18.3)	0
Permit Methadone & Buprenorphine	19 (26.8)	12 (80.0)
Ownership, n (%)		
Owner	39 (54.9)	12 (80.0)
Employee	31 (43.7)	3 (20.0)
Shareholder	1 (1.4)	0
Race, n (%)		
Malay	33 (46.5)	3 (20.0)
Chinese	23 (32.4)	4 (26.7)
Indian	12 (16.9)	7 (46.7)
Others	3 (4.2)	1 (6.7)

Abbreviation: Permit NaOH – Permit to Purchase Store and Use of Sodium Hydroxide; Permit Methadone & Buprenorphine – Permit to Purchase and Use Psychotropic Substances (Methadone and Buprenorphine); SD – standard deviation; IQR – interquartile range.

Table 2: Type of offences recorded in the regulatory letters issued in 2017 (n=83)

Acts / Regulations	Offence in 2017, n (%)	Repeated Offence in 2018, n (%)
Poison Act 1952	18 (21.68)	3 (20.00)
S 15: Sale of poisons by wholesale	12	1
S 21: Group B Poisons	1	1
S 24: Prescription book	3	1
S 16: Sale of poison by retail	1	
S 26: Licenses	1	
Poison Regulations 1952	14 (16.86)	-
Reg 6: Manner in which poisons are to be stored	11	
Reg 12: Labelling of dispensed medicine	1	
Reg 9: All poisons to be labelled "Poison"	1	
Reg 11: Labelling of Part II Poisons on sale	1	
Poison (Psychotropic Substances) Regulations 1989	22 (26.50)	12 (80.00)
Reg 28: Labelling requirement for purposes of medical, dental or animal treatment	3	
Reg 19: Records for purposes of medical, dental or animal treatment	1	
Reg 22: Keeping and maintenance of register	2	1
Reg 15: Application for a permit to purchase and use psychotropic substances *	16	11
Medicines (Advertisement and Sale) Act 1956	8 (9.63)	-
S 4B: Advertisement of medicines to be approved	6	
S 4A: Prohibition of advertisements relating to skill and service	2	
Control of Drugs and Cosmetics Regulations 1984	3 (3.61)	-
Reg 7: Prohibition against manufacture, sale, supply, importation, possession and administration	3	
Terms and conditions in Permit NaOH	13 (15.66)	-
Permit and detail of purchase submitted to supplier	6	
Purchase should not exceed maximum quantity allowed	2	
Format for recording of purchase and use of sodium hydroxide	4	
Other	1	
Guideline / Policy	5 (6.02)	-
Signboard	5	
Total	83	15

Abbreviation: S – Section; Reg – Regulation.

* Under the provision of Regulation 15(3) of Poisons (Psychotropic Substances) Regulations 1989, terms and conditions specified for Permit Methadone & Buprenorphine must be complied by the permit holder.

Table 3: Association between repeated offence and characteristics of licence or permit holders

Variable	All licence holders (n=71)	Repeated offence (n=15)	No repeated offence (n=56)	p-value
Age, year, mean (SD)	44.5 (12.3)	53.9 (11.8)	42.4 (11.1)	0.001 ^a
Years as licence holder, median (IQR)	4.0 (4.0)	6.0 (2.0)	3.0 (4.0)	0.001 ^b
Gender, n (%)				0.123 ^c
Male	49 (69.0)	13 (26.5)	36 (73.5)	
Female	22 (31.0)	2 (9.1)	20 (90.9)	
Ownership, n (%)				0.061 ^c
Owner	39 (54.9)	12 (30.8)	27 (69.2)	
Employee	31 (43.7)	3 (9.7)	28 (90.3)	
Shareholder	1 (1.4)	0 (0.0)	1 (100.0)	

^a Independent t-test; ^b Mann-Whitney test; ^c Fisher's exact test.

Abbreviation: SD – standard deviation; IQR – interquartile range.

Discussion

In this study, the types and frequency of offences are described by characterising them according to the acts and regulations under the purview of MOH Pharmacy Enforcement Services. Regulatory letters in this study included Warning Letters, Reminder Letters and Notices of Violation that were issued to the licence or permit holders upon detection of any activity or product that violate the law. There are a number of regulatory letters being practiced by regulatory agencies around the globe. For example, the United States Food and Drug Administration (FDA) have a few types of letters when it comes to regulatory actions, depending on the significance of the offence (5). One of it is warning letter. It is issued to achieve voluntary compliance and to establish prior notice. This will give an individuals and firms an opportunity to take voluntary and prompt corrective action before enforcement action is initiated. The FDA position is that warning letters are issued only for violations of regulatory significance that may lead to enforcement action if not promptly and adequately corrected (6). The Kedah Pharmacy Enforcement Branch also issued notices of violation, reminder letters and warning letters, all referred as regulatory letters in this study. All these letters are included in this study and those receiving these letters were asked to take remedial action. A warning letter case study showed that a medical device company sought a consultant company to guide and create a response and remediation strategy (7). It showed that warning letters had a very big impact to those receiving it and actions were taken as not to repeat the same offence. Nevertheless, in this study, the same offences were still being repeated despite the issuance of regulatory letters.

From all the offences found in this study, most of them were related to Licence A and Licence B holders as they deal with various poisons and therefore were more bound to these acts and regulations. Licence A applicants are registered pharmacists who must pass the Qualifying Examination to Practice Pharmacy which is the prerequisite for registration with the Pharmacy Board of Malaysia (PBM) (8). Only those registered with PBM can apply for Licence A and practice pharmacy in Malaysia. This ensure that they are well versed with the Malaysian laws on poisons and sale of drugs. As for Licence B holders, they may not have the exposure to the act and regulations, but they have to go through an interview related to the law, with a passing mark of 50% before they can become a Licence B holder (9). For Permit (NaOH) holders, there is no exam or interview related to law, because they only deal with Sodium Hydroxide and all terms and conditions are printed out on the permit. This is also the same scenario with Permit (Methadone and Buprenorphine) that all the terms and conditions are printed on the permit. However, they are also bound to specific regulations such as Poisons (Psychotropic Substance) Regulations 1989. All the Permit (Methadone and Buprenorphine) holders are registered general practitioners who are familiar with psychotropic substances. Therefore, all the license or permit holders have basic knowledge about the related laws, thus ignorance of the law should not be the excuse for any non-compliance or violations.

Our study found that fifteen premises were still being issued with warning letters in 2018, for the same offences they have conducted in 2017. The highest frequency repeated offence was the non-compliance to condition No. 2 in Permit (Methadone and Buprenorphine). This requirement requires the permit holders to inform and send the invoices of all Methadone and Buprenorphine purchases to the Pharmacy Enforcement Branch within 14 days upon receiving the stock (2). Regulatory letters are issued if the invoices were received after more than 14 days or were not received at all. As mentioned previously, all the terms and conditions are printed clearly on the permit and it should be followed by the permit holders. Feedbacks by the permit holders stated that the required documents have been sent but were not received by the Pharmacy Enforcement Branch, or they missed out to send in the documents. A dialogue session will be a good platform to discuss this issue and create awareness in this targeted population to increase the compliance to the law. Further study is needed to figure out the reason of these repeated offences despite receiving the regulatory letters.

As we proceed to see the associations between repeated offences and the characteristics of the licence holders, statistical tests showed that there were no significant association between repeated offence with gender and ownership. However, the age and years of having licence did have a significant association with repeated offence. One notable theory of the age-crime curve is Moffitt's group-based typology introduced in 1993. The relationship showed that crime increases in early adolescence, around the age of 14, peaks in the early to mid-20's, and then declines thereafter (10). However, our findings did not fit this 'age-curve' crime, as our mean age of repeated offenders are 54 years old. Nearly all the work put forth to explain the age-crime curve has focused on traditional street crimes and according to Kanazawa & Still, (2000) crimes require physical strength and energy, both of which recede with age (11). This does not apply to the situation in this study as the offences recorded in this study did not fall under street crimes, nor did it

require physical strength and energy. Most of the offences were closer to 'white-collar' crimes which could be engaged by those considerably older than the typical street criminal (12).

The duration of holding a licence were also significantly associated with repeated offences, with the median duration of 6 years having license. This was in sync with our findings on significant association between age and repeated offence. An older age reflected a longer duration of having license. The highest repeat offenders were Permit Methadone holders, and they were general practitioners that had been in practice for years.

Even though warning letter had been issued, the same offences were still being repeated by 22.72% of the premises. Repeated offences by the license or permit holders showed that either the license or permit holders did not take the warning letter seriously or they were comfortable knowing that no legal action will be taken. Nevertheless, to ensure regulatory compliance, more serious enforcement actions can be taken by the Pharmacy Enforcement Branch such as licence revocations or suspensions, audit or prosecution. On the other hand, our sub-analysis found that 19 premises did not commit repeated offences but they were issued regulatory letters for different offences in the following years. The Pharmacy Enforcement Officers conducting the inspection will go through the same inspection elements every year. Further studies were needed to analyse whether this was due to lack of knowledge or plain ignorance.

With the results of this study, hopefully it can give a clear picture to which acts or regulations most violated and help PED to draft a measure as when to start taking legal action to these licensed premises with repeated offence. The results of this study, however, may be influenced by a number of limitations. Our main limitation is short period of time for data collection as we only include warning letter issued in 2017. Since the study sample only involved licensed premises in Kedah, Malaysia, it does not fully represent all licensed premises across Malaysia. Future studies could improve by having a longer period of observation with more data related to the licence holder collected, and to identify factors of repeated offences. It is believed that certain offence is intentionally done due to demand-supply concept. Future studies could also look into the environmental factors, location and socioeconomic of the local population, beyond the licence or permit holders.

Conclusion

In summary, this study described the types and frequency of offences committed by licensed premises under the purview of Pharmaceutical Services Division, Kedah. The highest offences were related to the Poisons (Psychotropic Substances) Regulations 1989 and the least offence committed falls under Control of Drugs and Cosmetics Regulations 1984. Overall, the prevalence of repeated offences in Kedah was considered low with most premises being able to rectify and comply with the law during inspection the following year. The results of our study, however, demonstrated a need to formulate a more strategic approach to create awareness and educate the licence holders about the regulatory requirements.

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Conflict of Interest Statement

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