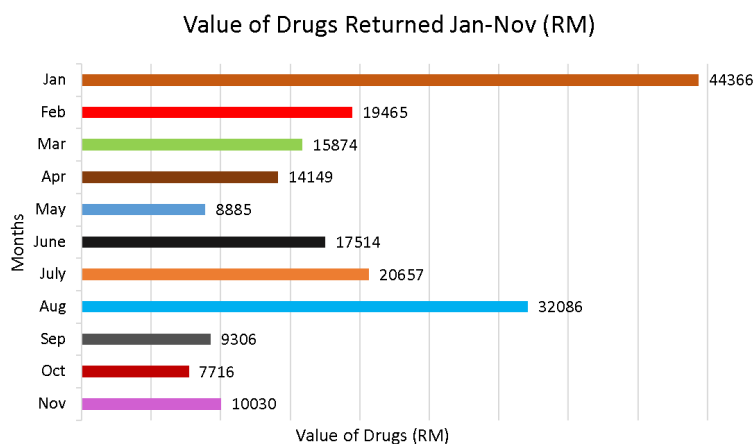


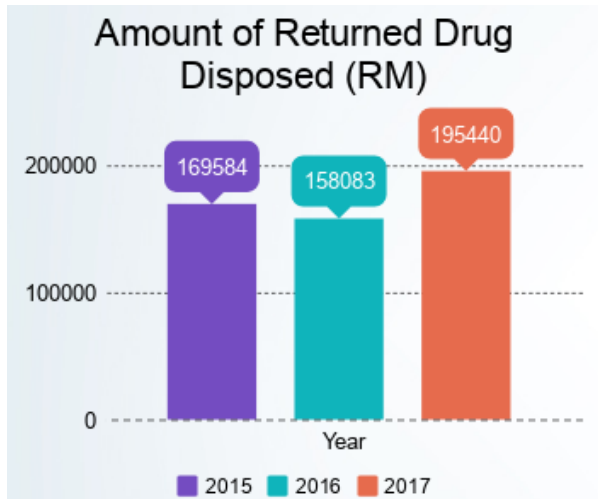


Medication Wastage by Patients: The Insights

Medication wastage refers to any medication which expires or remains unused throughout the whole medicine supply chain^[1]. One of the reasons of medication wastage may be contributed by **excessive medicines storage at home**^[1]. Drugs are supplied for a maximum of two months here in PPUKM. Some duplicate prescribing happens when patients go to multiple clinics for follow up.



The graph shows values of expired drugs returned by patients between January until November, summed up to around **RM200,000** for the year of 2018^[2].



On average, around **RM174,369** worth of expired drugs were returned by patients for the last three years^[2]. Just imagine the uncalculated amount of drugs flushed into the toilet bowl or dumped into the dustbin!

Some factors that contribute to excessive medicines storage by patients are^[3]:



A study done by M. Azmi Hassali and friends found out that the **patients were not fully aware of the types of medications they were using and how to use the medications properly**. They tend to **keep their medicines longer than necessary** and have the tendency of re-using and sharing the medications^[4]. West et al. stated that **patients tend to stock up on their drugs as they were afraid that their medications will be unavailable when they need them**^[1].

Most of the medications returned to pharmacy cannot be reused for other patients due to some reasons:

1. **Unknown storage condition** at home. For example, unopened insulin cartridges being kept at room temperature instead of in the fridge at 2-8°C.
2. **Expired or having expiry date of less than 6 months** to avoid other patients taking expired drugs.
3. **Drugs supplied by other hospitals** or clinics to avoid patient confusion.
4. Some drugs **may lose potency** after being exposed to direct light. For example, Sublingual tablet GTN.
5. Medicines that have been contaminated.

Estimated value of expired drugs returned to pharmacy:



RM 691.10
NovoRapid 300iu/3mL
Flexpen Inj.



RM 603.50
Cyclosporin Neoral
25mg Cap.



RM 6097.00
Victoza 6mg/mL (3mL) Inj.



RM 313.80
Symbicort 160/4.5mcg
Turbuhaler



RM 170.00
Morphine HCL 10mg/5mL
Solution



RM 2602.86
Lantus Solostar 100iu/mL
(3mL) Inj.



RM 113.40
Seretide 50/500ug
Accuhaler



RM 1216.95
Insulin Actrapid, Mixtard,
Insulatard HM Penfill 100iu/mL
(3mL) Inj.

How can we help to reduce medication wastage?

1. **Improve patients understanding/knowledge about their disease condition.** Patients who know their disease well will learn about their medications and understand the importance of compliance to the drugs. Logically, patients who are compliant will not have a lot of extra unused medications.
2. **Implement 'Only Order What You Need'** during screening of the repeat medication prescription at the counter.
3. **Emphasize on the storage condition** for medications that need special storage temperature or environment. For example insulins, eye drops and inhalers. Unopened insulin cartridges and vaccines need to be kept in 2-8°C (fridge).
4. Encourage patients or family members to **return the drugs as soon as possible** after the treatment is stopped/changed.
5. Make patients **aware of the price of each drug** being prescribed to them and the cost incurred.

In conclusion, education on compliance and adherence to therapy is very important. One must always remember to take their medications diligently. If there are any side effects experienced, patients should be welcomed to ask questions and seek advice. Do not stop taking medications without consulting their healthcare professionals. Compliance is very important not only to avoid medication wastage, but most importantly to improve the quality of health.

References:

1. Kifli, N. (2016). Medication Wastage and its Disposal Amongst Patients at Suri Seri Begawan Hospital in Brunei Darussalam. *Medicine & Health*, 11(2), pp.139-150.
2. Statistik Pembuangan Ubat 2018, Farmasi Pesakit Luar, HCTM UKM.
3. Garis Panduan Program Pemulangan Ubat, Bahagian Perkhidmatan Farmasi, Kementerian Kesihatan Malaysia
4. Hassali MA, et al. (2012). The Characteristics of Drug Wastage at the Hospital, Tuanku Jaafar Seremban, Malaysia: A descriptive study. *Journal of Clinical and Diagnostic Research*. 6(5), pp. 787-790.

By Nur Hafiza Saripin

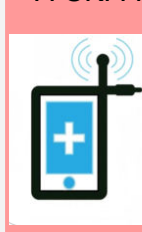
A publication of Drug Information Centre,
Pharmacy Department, HCTM UKM

PDF version available at <https://www.ppukm.ukm.my/farmasi/>
Co-Editors

IZYAN DIYANA IBRAHIM
izyandi@ppukm.ukm.edu.my
03-91455415

MICHELLE TAN HWEE PHENG
hptan@ppukm.ukm.edu.my
03-91455401

PPUKM Formulary App is now available on:



(Drug Formulary DIY)



(PPUKM Drug Formulary)

