

## Analysis of Unused Medicines and Cost among Patients in Tanglin Health Clinic, Malaysia

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### ABSTRACT

**Introduction:** Unused medicines among patients is seen as a critical problem in the healthcare system in Malaysia, contributing to drug wastage, increased national financial burden and decreased treatment cost-effectiveness. This descriptive, cross-sectional study at Tanglin Health Clinic aimed to identify the unused medicines, its cost, contributing factors and medication adherence among patients. **Methods:** Unused/remaining medications brought by patients to pharmacy prior medications refill were listed and the cost was calculated in Phase 1, using cost price from Lembah Pantai District Health Office, Kuala Lumpur. During Phase 2, questionnaires were distributed to assess adherence and to identify factors contributing to having many remaining medications. Study was conducted from October 2020 to May 2021. Data collected were analyzed using SPSS v22. **Results:** A total of 72520 tablets/capsules and 397 insulin vials were found unused by patients, accounting for a total cost of RM8926.91, with an average cost of RM21.25 per patient. The top 3 quantities of unused medicines were Metformin, Perindopril and Simvastatin. The top 3 highest costs of unused medicines were Metformin, Insulin Insulatard and Insulin Actrapid. 57.8% of patients with many unused medications were incompliant to medications. Common reasons of incompliance were: not taking medicines when "started feeling better" and "taking supplements/traditional/herbal medicines concurrently". Main reason of being compliant but having many unused medications was "pharmacy has supplied extra quantity of medicines". **Conclusion:** A vast quantity of unused medicines among patients exists, which markedly increases the national financial burden. Measures should be taken to avoid medication wastage.

## Assessment of Lean Maturity Level in Emergency Department of Hospital Bukit Mertajam Based on Staff Exposure on Lean Training

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### ABSTRACT

**Introduction:** This study aimed to increase the awareness and knowledge of lean among healthcare worker and to assess the relationship between exposure of lean training to maturity level among staffs in Emergency Department of Hospital Bukit Mertajam, Malaysia. **Methods:** This cross-sectional study used a survey based on Liker's four points, divided into 16 items organized into 4P model: philosophy, processes, people and partners, and problem solving. These data were analysed using Chi-Square Test in Excel 2104. Participants were divided into 2 groups, consisting of staff with and without lean training. This questionnaire has a set of five ratings (1-3 being low, 4-5 being high). P-values <0.05 was considered to be statistically significant. **Results:** Based on the information collected from 66 respondents in this survey, we found that there was statistically significant between staff who attended lean training to those who did not. Results showed that staff who had lean training performed with higher maturity level in perspective of philosophy (p=0.045); processes (p=0.001) and problem solving (p=0.0004). However, there was no statistically significant finding for lean maturity associated with people and partner (p=0.104). **Conclusion:** Results indicated that higher lean maturity increases quality of care. People and partners show no significance in lean maturity level, regardless of exposure to training. It found that knowledge, skills and experience from those who attended lean training can be shared verbally and physically through proper staff communication. Lean training optimizes healthcare staff performance. It should be implemented in order to improve, standardize, and sustain the maturity level of staff.