

## **Pill-Box Dispenser as a Strategy for Therapeutic Management: A Qualitative Evaluation**

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**Abstract :** Population ageing is directly correlated to an increase in medicine consumption. Beyond the latter and the polymedicated profile of elderly, it is possible to see a need for pharmacotherapeutic monitoring due to cognitive and physical impairment. In this sense, the tracking, organization and administration of medicines become a daily challenge and the pill-box dispenser system a solution. The pill-box dispenser (system) consists in a small compartmentalized container to unit dose organization, which means a container able to correlate the patient's prescribed dose regimen and the time schedule of intake. In many European countries, this system is part of pharmacist's role in clinical pharmacy. Despite this simple solution, therapy compliance is only possible if the patient adheres to the system, so it is important to establish a qualitative and quantitative analysis on the perception of the patient on the benefits and risks of the pill-box dispenser as well as the identification of the ideal system. The analysis was conducted through an observational study, based on the application of a standardized questionnaire structured with the numerical scale of Likert (5 levels) and previously validated on the population. The study was performed during a limited period of time and under a randomized sample of 188 participants. The questionnaire consisted of 22 questions: 6 background measures and 16 specific measures. The standards for the final comparative analysis were obtained through the state-of-the-art on the subject. The study carried out using the Likert scale afforded a degree of agreement and discordance between measures (Sample vs. Standard) of 56,25% and 43,75%, respectively. It was concluded that the pill-box dispenser has greater acceptance among a younger population, that was not the initial target of the system. However, this allows us to guarantee a high adherence in the future. Additionally, it was noted that the cost associated with this service is not a limiting factor for its use. The pill-box dispenser system, as currently implemented, demonstrates an important weakness regarding the quality and effectiveness of the medicines, which is not understood by the patient, revealing a significant lack of literacy when it concerns with medicine area. The characteristics of an ideal system remain unchanged, which means that the size, appearance and availability of information in the pill-box continue to be indispensable elements for the compliance with the system. The pill-box dispenser remains unsuitable regarding container size and the type of treatment to which it applies. Despite that, it might be a future standard for clinical pharmacy, allowing a differentiation of the pharmacist role, as well as a wider range of applications to other age groups and treatments.

**Keywords :** clinical pharmacy, medicines, patient safety, pill-box dispenser

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