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Appropriateness of medication repacking in pharmacy dispensing units – A study at a teaching hospital, Sri Lanka

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Background: Due to the challenging nature of dispensing in hospital pharmacies selected medications are pre-packed as monthly supply packs.
Objective: This study aimed to directly observe the appropriateness of the medication repacking process of a selected teaching hospital which was previously identified as a possible high-risk failure mode through a failure mode and effect analysis.
Method: This observational, cross sectional study was conducted using a pre-prepared checklist developed in-house by the research pharmacist, modified by a senior pharmacy academic and content validated by an expert panel of two senior pharmacy academics and one senior administrative level hospital pharmacist. Repacking cycles of selected medications were observed on-site, independently by two pharmacists for a period of one month (December 2020 to January 2021). Kappa coefficient was used to compare records of the two observers.
Results: A total of 137 cycles were observed. Kappa coefficient was one. While the process was conducted by support staff, there was no pharmacist supervising and checking the original container, expiry date, or repacked labels. Pre-estimated weekly required amount was packed for 128 cycles which were selected as fast-moving medications. Tablets were not counted but roughly quantified using a pre-estimated container for all cycles. Labeling was done later for all the repacked medications packs, but medication packets of the same type were kept with one original container to avoid any confusion. Simultaneous repacking of several medications was observed in all cycles and possible contaminants like food, beverages and dust of other medications were observed. Liquid and air proof material were used for repacking and labels had a pre-determined colour scheme. Labels contained generic name and strength, but re-packed date or batch number were not indicated. Repacked medications were stored according to First-In-First-Out method.
Conclusion: Repacking of medications is vulnerable to high-risk failures, and direct supervision of a pharmacist in a dedicated repacking unit will help to improve patient safety.