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Omni-Sell Out Abstract

Automated medication dispensing systems, such as the Accuflex 3, are designed to enhance pharmacy efficiency and reduce manual workload. This study evaluates the performance of the Accuflex 3 at Mac Rx of Missouri, assessing its accuracy in detecting dispensing errors and the role of technician oversight in ensuring medication safety. Data was collected over 30 shifts, tracking errors flagged by the machine versus those identified by technician. Results show that while the machine successfully detects no drop (ND) and double drop (DD) errors, it failed to recognize 17.90% of ND errors and 40.98% of DD errors, highlighting the necessity of technician verification. Additional findings suggest that issues such as machine maintenance, cassette refinement, and staff training contribute to dispensing errors. The study concludes that while automation significantly improves workflow, a hybrid approach combining machine accuracy with technician oversight is essential for minimizing errors and ensuring safe medication dispensing. Future research should focus on enhancing error detection algorithms, refining machine maintenance protocols, and expanding technician training to further optimize system performance.