

CASE STUDY

Prevention of Hazardous Drug Cross-Contamination During Unit Dose Packaging



Doylestown Health implements Medi-Dose as a secondary packaging option to prevent cross-contamination with their existing tabletop unit dose strip packaging technology.



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PRIMARY INTENDED OUTCOME(S)

Our goal was to prevent cross-contamination of NIOSH hazardous drug classes with our existing strip packaging automation by implementing an alternative/secondary unit dose packaging system.

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[The Medi-Dose System](#)

Special Handling Categories

1. NIOSH hazardous drugs (groups 1, 2, & 3)
2. Allergic cross-sensitivity drugs (penicillin, sulfa, etc.)
3. "No Crush" PO drugs (estrogens)
4. Heat sensitive meds (existing auto strip packager runs at 110°F)
5. Controlled substances

THE CHALLENGE

Due to the hazardous nature and cross contamination issues with certain drugs, many medications could not be repackaged and bar coded through our existing strip packaging system. Therefore, an alternative/secondary repackaging solution was needed to accommodate NIOSH hazardous drugs, as well as drugs in which there was a historic challenge of automated strip packaging. These drug categories included:

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- Allergic cross-sensitivity drugs (penicillin, sulfa, etc.)
- "No Crush" PO drugs (estrogens)
- Heat sensitive meds (existing auto strip packager runs at 110°F)
- Controlled substances

THE DECISION

We determined that the Medi-Dose cold seal packaging system and accompanying MILT 4 software was a fit for packaging and bar coding our "special handling" categories of medication. Factors that led us to implement the Medi-Dose System included:

- **Minimal Training Resources:** We wanted a solution that was simple and that required little training.
- **Flexible Labeling & Bar Coding:** We required multiple options (color, font, size, etc.) to strengthen communication with the pharmacy team as well as the nursing staff. We wanted a flexible labeling solution that could be also used in situations beyond the packaging of hazardous drugs (labeling of syringes, vials, etc.).
- **Secure Packaging:** We required blister packaging that provided UV light protection, tamper-evidence, moisture resistance, and beyond use dating.
- **Space Requirements:** Space is limited, so we wanted a solution that required minimal space.
- **Customer Service:** We required strong customer service and support.
- **Cost Containment:** We wanted a solution with reasonable start-up and maintenance costs, as well as manageable long-term cost of supplies. The full Medi-Dose System can be implemented for less than \$2000.
- **Robust Reporting:** We required detailed reporting on the packaging process (what, when, who, how many, etc.).

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THE RESULTS

The Medi-Dose System accommodated our unit dose repackaging needs and continues to serve as the perfect alternative to our strip packager. Medi-Dose can accommodate all of our “special handling” categories of medication.

The MILT 4 label software has proved to be very flexible and practical. Labeling flexibility with the MILT 4 software helped to greatly improve communication with the nursing staff regarding the special handling of certain drug classes. The reporting capabilities of the MILT 4 software are robust and meet our needs.

In addition to the repackaging of hazardous drugs, the Medi-Dose System presented additional benefits in the following situations:

- **Small Lots**

The Medi-Dose System comes in handy with repackaging and bar coding small lots of borrowed and non-formulary drugs, especially during the weekend, when full configuration of the strip packager may not be practical.

- **Down Time**

We are very satisfied with our existing tabletop strip packager, but like all technology, downtime is a reality. Medi-Dose has successfully filled the gap when our UD automation has been down.

- **Manufacturer Changes**

If a different brand of PO drug is received, especially during the weekend, it is typically much easier to repackage with the Medi-Dose System than to configure the strip packager.

THE CONCLUSION

The Medi-Dose unit dose system and accompanying MILT 4 software exceeded our needs as secondary/alternative unit dose packaging system. We can't say enough about the Medi-Dose customer service, which has far exceeded our expectations in accommodation and responsiveness. We will continue to utilize Medi-Dose in the foreseeable future and recommend Medi-Dose for any health system that finds itself in a similar situation.

— Chantel Farrello, RPh

“Due to NIOSH hazardous drug categories, many hospitals have implemented alternate UD packaging solutions.”



Robert Braverman
President
~ Medi-Dose

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