

# Complexity and Vulnerability of Multi-Medication Compliance Aids

Joyce Tsang, BScPhm, BSc; Certina Ho, RPh, BScPhm, MSt, MEd

## Recommendations

1

**Verify** the printed prescription labels with the most current prescription order(s), including hospital discharge order, new prescription, and/or discontinuation of medications, etc.

2

**Incorporate** reminders on the computer system that will automatically flag any prospective changes needed to be made during the next compliance pack cycle.<sup>1</sup>

3

**Conduct** independent double-checks whenever possible in the pharmacy workflow.<sup>6</sup>

4

**Implement** barcode scanning (if possible), which serves as an automated independent double check to verify that the drug product and strength selected from the inventory matches with what has been entered into the patient's profile.<sup>7</sup>

## Conclusion

Although multi-medication compliance aids may facilitate patient's adherence and improve treatment outcomes, the complexity of the design and procedures for preparation may potentially lead to an increased risk of errors. Recognizing the vulnerabilities of compliance pack preparation creates opportunities for pharmacists to implement additional safeguards to enhance medication safety.

### References

1. Hack B. Compliance packaging: issues and considerations. *Pharmacy Connection* 2010; 17(4): 32-34.
2. Hack B, Dufour J. Compliance packaging: issues and considerations part II. *Pharmacy Connection* 2011; 18(1): 35-36.
3. The Pharmacy Group. *Community Pharmacy in Canada A Statistical Report*. Rogers Business and Professional Publishing, 2008; 18.
4. Incident analysis collaborating parties. *Canadian analysis framework*. Edmonton, AB: Canadian Patient Safety Institute; 2012. Available from: <http://www.patientsafetyinstitute.ca/English/toolsResources/IncidentAnalysis/Documents/Canadian%20incident%20Analysis%20Framework.PDF>
5. Ho C, Hung P, Lee G, Kadja M. Community pharmacy incident reporting: A new tool for community pharmacies in Canada. *Healthcare Quarterly* 2010; 13: 16-24.
6. ISMP Canada. Lowering the risk of medication errors: Independent double checks. *ISMP Canada Safety Bulletin* 2005; 5(1): 1-2. Available from: <http://www.ismp-canada.org/download/safetyBulletins/ISMPCSB2005-01.pdf>
7. Institute for Safe Medication Practices. Double-checking bingo cards. *ISMP Medication Safety Alert! Community/Ambulatory Care Edition* 2013; 12(10): 2-3.

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## THEME 1: Order Entry

Hospital Discharge Order  
Discontinuation of Medication from New Order  
New/Prospective Update of Prescriptions  
Miscalculation

*The patient arrived at the pharmacy at 4:30 P.M. and the pharmacy was scheduled to close at 5 P.M. The patient was discharged from a hospital with numerous changes to his blister pack. Several errors were made.*

- ❖ *2 prescriptions from the hospital discharge order were put under the patient's family doctor's name and not the hospital discharge doctor's.*
- ❖ *The SIG on allopurinol was read "TO the once daily"*
- ❖ *Clopidogrel was supposed to be continued for 39 days after discharge as per the hospital discharge order, but it was only filled for 28 days without putting the refill for the remaining 11 days.*
- ❖ *The pharmacist was rushing to get new orders from the patient's family doctor and calling the hospital to clarify for warfarin since it was not on the hospital discharge order, and it was supposed to be restarted after clopidogrel was finished.*

## THEME 2: Packaging Process

Labeling  
Incorrect Time of Administration  
Half-Tablet Medications  
Improper Return-to-Stock Procedures  
Dose/Medication Omissions  
Incorrect Medication/Strength

## Background

Compliance packaging helps to enhance a patient's adherence to their medication schedule, particularly for those who are older, have cognitive impairment, and/or on a large number of medications, and ultimately optimizes the effectiveness of medication therapy.<sup>1,2</sup> Approximately 70% of Canadian community pharmacists feel that the use of special packaging is one of the important factors to improve medication adherence.<sup>3</sup> Therefore, compliance packaging is becoming more common for medication management in community pharmacy practice.

## Objectives

Traditional processing/dispensing of prescriptions is involved with high-level procedures; compliance packaging introduces further complexity and vulnerability in the pharmacy workflow due to its multi-compartmental design, which increases the unpredictability and variations of the medication-use system.<sup>4</sup> The objective of this project is to gain a better understanding of the potential contributing factors for compliance-pack related medication incidents.

## Methods

Searched ISMP Canada Community Pharmacy Incident Reporting Program (CPIIR) Program.<sup>5</sup>

Extracted medication incidents involving "blister pack", "compliance pack", "pill pack", and/or "bubble" from June 2012 to May 2013.

170 incidents met inclusion criteria.

Selected medication incidents were analyzed and categorized into themes.