Multi-incident Analysis of Medication Incidents involving Contraceptives

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Objectives

- Medication errors involving contraceptive medications have not been well-explored.
- The consequences of medication incidents involving contraceptives can be significant, ranging from adverse effects such as breakthrough bleeding and breast tenderness depending on the dose of the contraceptive, to unintended pregnancies due to improper use.
- This study shares information about medication incidents involving contraceptives voluntarily reported to the ISMP Canada's Community Pharmacy Incident Reporting (CPhIR) Program (www.cphir.ca) and highlights the common themes identified through a multi-incident analysis.
- Specific examples of reported incidents are provided to develop system-based improvements that can be customized to pharmacy practice setting.

Methods

- Reports of medication incidents involving contraceptives were extracted from the CPhIR Program from November 2009 to March 2013.
- 256 incidents were retrieved and included in this qualitative, multi-incident analysis.
- The medication incidents were independently reviewed by two ISMP Canada Analysts.

Results

- The 256 medication incidents were categorized into two main themes (Table 1):
  1. Oral Contraceptives; and
  2. Non-Oral Contraceptives.
- The two main themes were further divided into 10 subthemes (Table 2 and Table 3).

TABLE 1. Main Themes and Subthemes from the Multi-Incident Analysis

Oral Contraceptives	Non-Oral Contraceptives
Look-alike / Sound-alike (LASA) Drug Names / Packaging	LASA Drug Names
Inappropriate Quantity	Inappropriate Quantity
Unique or Fixed Dosing Regimen of Contraceptives	Unique or Fixed Dosing Regimen of Contraceptives
Absence of Clear Patient Medication History	Brand / Generic Confusion
Lack of Education on the Part of the Patient	
Brand / Generic Confusion	

TABLE 2. Theme 1 – Oral Contraceptives

Subtheme	Incident Examples
Look-alike / Sound-alike (LASA) Drug Names / Packaging	*TRI-CYCLEN vs. TRI-CYCLEN LO* *YAZ vs. YASMIN* *TRI-CYCLEN vs. TRIQUILAR* *SEASONALE vs. SEASONIQUE* *AVIANE vs. APRI* *ORTHO-EVRA vs. ORTHO-CEPT* *DIANE vs. AVIANE* *LINESSA vs. ALESSE* *MINESTRIN vs. LOESTRIN*
Inappropriate Quantity	**Incorrect quantity based on duration of therapy [Aviane 28]:** *"A prescription for one year of birth control logged, but it was put in for a quantity of 12 packs instead of 13."* **Incorrect quantity based on unique directions [Alesse 28]:** *"Birth control was entered for 3 packages with directions as 'Take 1 tablet daily' but should have been 6 packages with directions for 'Take 2 tablets daily'."*
Unique or Fixed Dosing Regimen of Contraceptives	*"Dr. wrote Demulen 28 with directions for Demulen 21 (21 days, skip 7 days & repeat). Rx was put on hold with directions as written. This was noticed in time for the first fill."*
Absence of Clear Patient Medication History	*"Patient had doctor's appointment and was given new prescription for birth control pills. When a pharmacy staff member was preparing the prescription, they noticed it was for a different product than before (the prescription was for Aviane, but the patient had always been on Apri). The patient was expecting same one as before, and there had not been any discussion about switching during appointment."*
Lack of Education on the Part of the Patient	*"Ortho 0.5/35 (28 day) was not available and 21-day packs were dispensed instead. The patient was informed of this change but the directions were not changed from 1 tablet daily. She took them continuously, not understanding the 21-day regimen."*
Brand / Generic Confusion	*"Rx was entered for brand name Alesse but filled with the generic version (Aviane)."*

TABLE 3. Theme 2 – Non-Oral Contraceptives

Subtheme	Incident Examples
LASA Drug Names	*"Technician filled new Rx and interpreted provera as depo-provera."* *"Physician prescribed and administered Depo-Medrol, but patient was expecting Depo-Provera."*
Inappropriate Quantity	*"A prescription was being refilled, but pharmacy staff noticed the label was split for 3 packs of 4 patches, but Evra comes in packs of 3 patches. The inventory was over by one box – pharmacy staff questioned the patient and it was confirmed that she had only received 3 last time."* *"A pharmacy staff member entered the prescription as 1 ring would be for a one-week supply, when it is actually for a 1 month supply."*
Unique or Fixed Dosing Regimen of Contraceptives	*"Instructions for Nuvaring said 'Take'; the directions were changed to 'Use'."*
Brand / Generic Confusion	*"Patient specified that she wanted brand name Depo-Provera, and I put it through for the generic brand."*

Conclusions

- The opportunity for potential medication incidents involving contraceptives can occur at various points along the stages of medication use, such as prescribing, order entry, and dispensing of the contraceptive products.
- Pharmacists can apply incident analysis findings to pinpoint specific areas of weakness in their medication delivery systems and to prevent risk in daily practice.
- The ultimate goal is to continuously improve patient safety and thus the quality of care through the analysis of incidents and sharing of lessons learned from these reports.

References

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The authors would like to acknowledge the support from the Ontario Ministry of Health and Long-Term Care for the development of the CPhIR program. CPhIR contributes to the Canadian Medication Incident Reporting and Prevention System (CMIRPS) (www.ismp-canada.org/cmirps/).

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Institute for Safe Medication Practices Canada
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