

ALTERNATIVE VIEWPOINTS

Types of Pharmacist Interventions Intended to Prevent and Solve Negative Outcomes Associated with Medication

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After reading the article published by Dr. Hoth and her colleagues,¹ we consider it very important to make some comments concerning their proposal of taxonomy to classify clinical pharmacy interventions.

Since 1999, the Dader Program of pharmacotherapy follow-up (PTF) has provided a simple documentation system designed to supply the key information about the process and results of PTF.^{2–4} Pharmacist intervention (PI) intends to prevent or solve negative outcomes associated with medication (NOM).⁵ Intervention form (IF) is the record used by the pharmacists registered into the Dader program, in order to communicate the interventions carried out with each patient.⁴ The Delivery and record of IF have given rise to an extensive database; which is currently made up of 15,708 records and therefore represents an important source of investigation.

In 2005, we published a study providing a classification of the different types of pharmacist interventions that can be carried out to prevent or resolve a NOM.⁶ We analyzed the IF recorded in the year 2002, obtaining a list of 9 types of PI (Table 1). This list presents some differences with respect to the one proposed by Dr. Hoth and her colleagues, namely:

- The options “start alternative therapy”, “change route”, and “change dosage form” were grouped as: *replace one drug*, which includes change in the drug substance,

excipients, administration route or dosage form.

- The option “change dosage strength” was assumed as an adjustment of the quantity of drug being administered right away, that is, to change the dose.
- The options: “provide patient education” and “enhance compliance” should be considered as 3 specific responses, so that they included any educational intervention by the pharmacist: *Educate in the use of the drug, modify behaviors towards the pharmacotherapy and educate about non-pharmacological measures.*
- The option “recommendation for therapeutic/disease monitoring” was not included in the list of *pharmacist interventions*, since this recommendation does not match an action that is intended to directly prevent or resolve a NOM.

Finally, both our list and Dr. Hoth’s list about the different types of PI are neither exhaustive nor exclusive and therefore they cannot be considered as a classification.

References

1. Hoth AB, Carter BL, Ness J, Bhattacharyya, Shorr RI, Rosenthal GE, Kaboli PJ. Development and Reliability Testing of the Clinical Pharmacist Recommendation Taxonomy. *Pharmacotherapy* 2007;27(5):639–46.
2. Martínez F, Fernández-Llimós F, Gastelurrutia MA, Parras M, Faus MJ. Programa Dáder de seguimiento del tratamiento farmacológico. Resultados de la fase piloto. *Ars Pharmaceutica* 2001;42:53–65.
3. Martín Calero MJ, Machuca M, Murillo MD, Cansino J, Gastelurrutia MA, Faus MJ. Structural Process and Implementation Programs of Pharmaceutical Care in Different Countries. *Curr Pharm Design* 2004;10:3969–85.
4. Pharmaceutical Care Research Group, University of Granada (Spain). *Pharmacotherapy Follow-up: The Dader Method* (3rd revision: 2005). *Pharmacy Practice* 2006;4:44–53.
5. Comité de Consenso. Third Consensus of Granada on Drug Related Problems (DRP) and Negative Outcomes associated

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Table 1. Comparison between list of pharmacist interventions and list of specific responses.

| Category | Pharmacist Interventions ⁶ | Specific Responses ¹ |
|--|---|---|
| To intervene on the quantity of the drug | To change the dose: Adjustment of the quantity of drug being administered right away To change the dosing: Change of frequency and/or duration of treatment To change the administration schedule (redistribution of the quantity): Change of the scheme in which the doses of drug are distributed for one day. | Change dose Change dosage strength Change duration of treatment Change schedule |
| To intervene on pharmacological strategy | To replace a drug: Replacement of any drugs among those used by the patient by others with different composition or of different pharmaceutical form or administration route. To add a drug: Addition of a new drug that was not in use by the patient. To withdraw a drug: Abandon of the administration of a specific drug(s) among those used by the patient. | Start alternative therapy. Change dosage form Change route. Start medication Discontinue medication |
| Intervene on the patient's education | Change of behavior towards the pharmacotherapy. (Reduce the voluntary non-compliance): Emphasis on the importance of patient's adherence to the treatment. Educate in the use of the drug (To reduce the involuntary non-compliance): Education about instructions and warnings for the correct use and administration of the drug. Educate about non-pharmacological measures: Education of the patient about all hygienic and dietetic measures that can help to reach the therapeutic objectives. Actions such as requesting a laboratory test to get more information, or monitor any parameter, should not be considered as genuine pharmacist interventions | Enhance compliance Provide patient education Recommendation for therapeutic/disease state monitoring |

with Medication (NOM). *Ars Pharm* 2007;48:5–17.

6. Sabater D, Fernández-Llimós F, Parras M, Faus MJ. Types of pharmacist interventions in pharmacotherapy follow-up. *Pharmacy Practice* 2005;3:90–97.

Author's Reply

Dr. Angela Hoth declined the opportunity to reply.