Compounding Practices in a Portuguese Community Pharmacy

FIGURE 1. Formulário Galénico Português monograph: Phenobarbital 1% oral suspension.
FIGURE 2. Example of a Portuguese electronic prescription for Trimethoprim 1%.

Patient's Name:  
Patient's Telephone:  
Entidade Responsável: SNS  
Nº de Beneficiário:

Doctor's Name:  
Especialidade: PEDIATRIA  
Doctor's Telephone:

Barcode Identification  
Barcode Identification

<table>
<thead>
<tr>
<th>DCI / Nome, dosagem, forma farmacêutica, embalagem, posologia</th>
<th>N.º Extenso</th>
<th>Identificação Ótica</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRIMETOPRIM 1% solução oral - manipulado</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posologia: 0,8 ml a noite</td>
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</table>

Validade: 30 dias  
Data: 2014-08-14  
Doctor's Signature
Pharmaceutical compounding in community pharmacy is currently a common practice in Portugal. The foundation of a national compounding department, the development of a national galenic formulary and the approval of up-to-date legislation contributed to the modernization of compounding practices in the past decade. Currently, all Portuguese community pharmacies have a compounding laboratory and minimum equipment for the preparation of non-sterile (traditional) compounded medicines. A few community pharmacies specialize in pharmaceutical compounding and also prepare innovative dosage forms for complex patients. Sterile compounded medicines are still prepared exclusively in the hospital setting.

The compounded medicines dispensed by the Pharmacy Lordelo (Vila Real, Portugal) in 2012 were systematically reviewed and analyzed. The most common medical specialties were pediatric patients (need for individual strengths and dosage forms) and dermatology patients (need for special combinations).

The most frequently dispensed compounded medicines corresponded to liquid dosage forms (32.4%), namely (in decreasing order) suspensions, solutions, syrups, and foams. Trimethoprim 1%, Omeprazole 0.2% and Nitrofurantoin 0.5% represented the top 3 oral liquids dispensed, which accounted for 48.2% of all oral liquids dispensed.

Semi-solid preparations were the next most frequently dispensed dosage forms and included (in decreasing order) creams, ointments, lotions, and gels. Creams and gels containing Hydroquinone (alone or in combination) accounted for 35.2% of all topical preparations dispensed.

Solid preparations were also dispensed, namely capsules and powders (mainly sachets), in variable quantities and dosage strengths. Capsules of Sodium Bicarbonate (500 mg and 1000 mg) corresponded to the most frequently dispensed solid preparations (37.0%), whereas capsules of Sulfadiazine (150 mg - 500 mg) corresponded to the widest variety of dosage strengths dispensed (n=7).

Commercial medicines were used in the preparation of 10.54% of all compounded medicines either by indication of the doctor (common practice in dermatology) or by lack of raw materials in bulk.

A total of 72.01% of all compounded medicines dispensed have been studied by Pharmacy Lordelo and standardized in individual monographs, which include references for the preparation, quality control, labeling and beyond-use-date of each medicine.

Compounding for medicine’s shortages and discontinued medicines was particularly important in the past year, considering the increasing disruptions in the medicines supply chain.

In Portugal, pharmaceutical compounding represents an invaluable therapeutic alternative that meets the need of individual (complex) patients which cannot be met by the pharmaceutical industry, and is increasingly important in today's health care provision.