ANALYSIS OF PEDIATRIC PHARMACEUTICAL COMPOUNDING IN A HOSPITAL PHARMACY DEPARTMENT

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INTRODUCTION

The pediatric population is a dynamic group, with major changes in pharmacokinetics and pharmacodynamics. Unfortunately, most medications commonly used in children do not have an approved labelling for use in these patients and are not available in appropriate formulations.

POURPOSE

To analyse extemporaneous formulas compounded in a Pharmacy Department for pediatric patients during 2009.

MATERIAL AND METHODS

Descriptive retrospective study of pediatric extemporaneous formulas made during 2009 in a 400-beds general hospital with 68 pediatric beds. Doctor's orders, compounding formula register book and standardized protocols were consulted in order to obtain the data. Each unit produced was considered as a formula.

RESULTS

- 2158 pediatric extemporaneous formulas were made for 139 patients (50 % girls), which corresponds to 8% of all compounded formulations developed.
- Patients' average age was 28 months. Patients' age distribution is shown in figure 1.
- Different types of extemporaneous formulas compounded are shown in figure 2.
- 36 different active ingredients were used. The most common formulas were redosed oral nutrition, followed by bosentan, omeprazole and methimazole capsules and liposomal amphotericin B preparations. 25% of the patients needed more than one different extemporaneous formula.

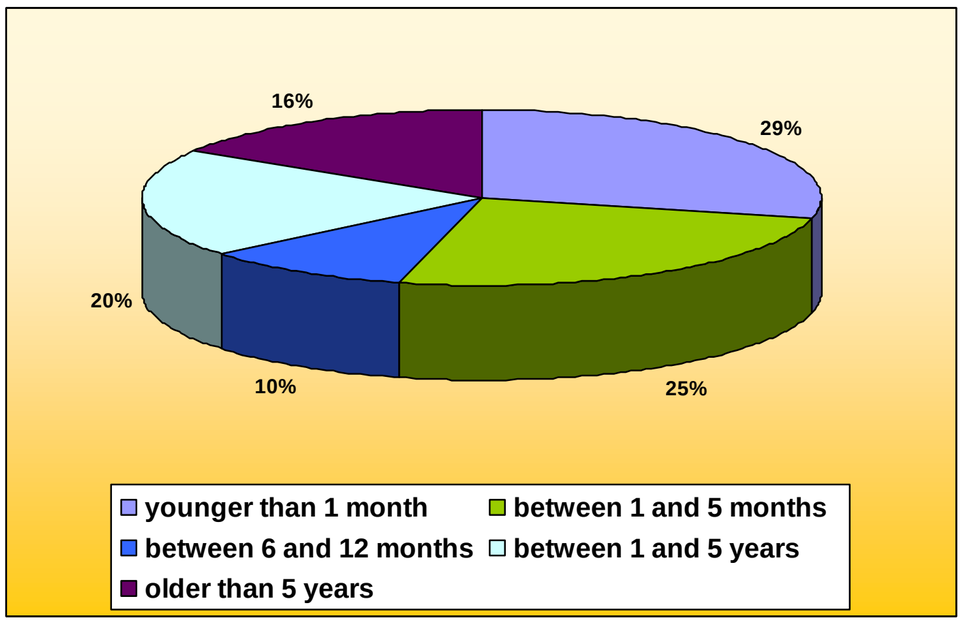

Figure 1. Patients' age distribution

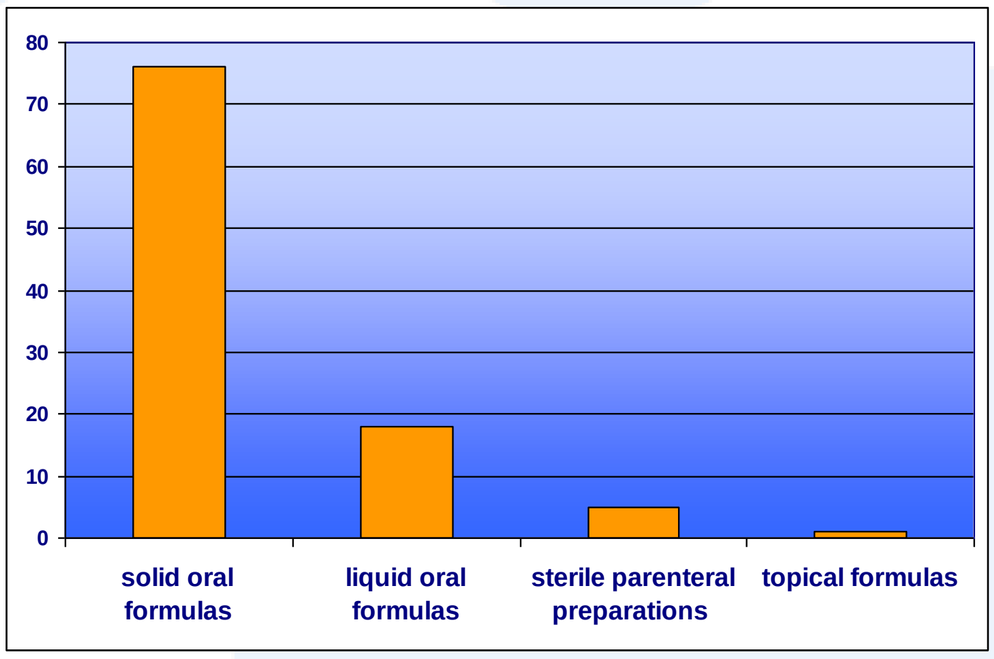

Figure 2. Types of extemporaneous formulas compounded

CONCLUSION

Pharmaceutical compounding is essential to provide the appropriate doses or dosage forms that pediatric patients require. The compounding pharmacist is instrumental in assisting the medical staff with developing these new treatments and compounded formulations to treat these patients. It would be desirable that drug manufacturers could produce strengths and dosage forms appropriate for children.