

7. SUMMARY

Magistral formulas (extemporaneous preparations) are of added value if, due to medical, pharmaceutical or personal reasons, they are needed by a specific patient or by specific population groups with particular needs. Only the pharmacy (community, hospital, onsite) is a public healthcare institution in which authorized persons (master's degree in pharmacy or pharmacy technician) provide preparation of magistral formulas.

The aim of the study was to analysis and evaluate the sector of magistral formulas on the example of the Warmińsko-Mazurskie Voivodeship. In this paper focuses on factors characterizing this sector, such as: the number, price value, patient population, or medical specialty. The analysis uses survey also expressing the opinions of patients, pharmacists and physicians about magistral formulas.

The analysis uses information about magistral formulas 10 516 prepared in 20 community pharmacies in the Warmińsko-Mazurskie Voivodeship in 2011-2013. The information included the age and sex of the patients, medical specialty of physicians prescribing magistral formulas, dosage form, composition, date of prescription and the price value of the magistral formulas. Source of information were pharmacy reports describing the issue magistral formulas 7812 (2011-2013) and 2704 original prescriptions for this preparations prepared in 2011. In addition, the survey has been carried out under the name of "Compounding pharmacy market", which provided information on the opinions of patients, pharmacists and physicians about magistral formulas. The study had a positive opinion of an independent Commission for Bioethics Research at the Medical University of Gdańsk # NKBBN/555/2014-2015.

As a result of analysis found that sector of magistral formulas shape primarily dermatologists and pediatricians prescribing, first and foremost, ointments and solutions. Basic therapeutic substances used for their preparation of the glucocorticoids (hydrocortisone, prednisone), organic acids (salicylic acid) and inorganic acids (boric acid). Prescription drugs are made for patients of all ages, for women twice as much as men. The availability of magistral formulas for patients is high, due to the large number of pharmacies, the obligation of the pharmacy to have at its disposal suitable and sufficient premises and technical equipment and the low cost of magistral formulas (93% of them is co-financed by the National Health Fund).

It was found that pharmacists do not have difficulties with the preparation of magistral formulas, however, the cost of their preparation (*taxa laborum*) does not cover the costs employment-related and utilization of unused substances. Both physicians and

pharmacists underline the importance of the magistral formula in personalized therapy. It has been observed that despite the large number of high-tech finished medicinal products produced by the pharmaceutical industry, compounding pharmacy is necessary to satisfy the needs of patients, in particular pediatric patients (preparation of doses for children of the finished medicinal products intended for adults, e.g. with tablets used in diseases of the circulatory system) and patients with psoriasis (preparation of ointments of various concentration of components). The ability to save doses that are not available in commercial products is appreciated by physicians.

In addition, physicians emphasize the importance of prescribing magistral formula in off-label prescribing. In their opinion the magistral formulas provides the patient a sense of special medical care. With research and analysis shows that, in the opinion of physicians and pharmacists magistral formulas give good quality. However, objections to the lack of clinical evidence of their effectiveness and durability (stability) and the lack of monitoring system side effects. Respondents has also shown the need to take action on promoting compounding pharmacy and develop standards, methods for their preparation.