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MEETING ABSTRACT

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In-home drug inventory among students – storage, use and disposal of drugs

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Background: Direct inspection of medicines stored in households allows insights into medicine use, storage, and disposal. Habits of students regarding medicines differ from the general population due to sociodemographic and other specific differences. This study aimed at describing patterns of medicines stored at students' home pharmacies, determine the volume of prescribed medicines and the rate of self-medication, as well as the medication storage and disposal habits among students in Novi Sad.

Methods: This cross-sectional study was performed in 70 student accommodations in Novi Sad in the period from 1 November 2018 until 20 December 2018. The study consisted of visiting student dormitories and making a direct insight into inventory of medicines based on the ATC classification and a semi-structured interview.

Results: All surveyed students' accommodations stored medicines. A total of 337 packages was found with the majority (71.4%) kept in one designated place, a home pharmacy. Drugs that affect the nervous system, the muscle–bone system and anti-infectives were the most common medicines in home pharmacies. Specifically, the drugs found in largest quantities were ibuprofen, paracetamol and diclofenac, accounting for 30.9% of the total number of drugs. Over 70% of medicines were purchased for self-medication. Antibiotics accounted for 5.9% of total drugs found, and from 20 packages of antibiotics, 6 were obtained without prescription (30%). About 10% of students stored expired drugs, 75% of medicines were kept properly, but a negligible part of them was properly disposed. Even though the majority of students (74.3%) considered that throwing medicines into the garbage and toilet is bad for the environment, most (41.4%) answered that this type of disposal is the easiest and the most convenient method of drug disposal. The majority of drugs in solid or semisolid pharmaceutical forms were disposed together with the household garbage (67.1%), and the same was shown for liquid forms (62.9%). Less than 3% of the respondents stated returning drugs to the pharmacy to be properly disposed.

Discussion: Several specific differences with respect to the general population in Novi Sad were determined: a lower rate of prescribed medicines and medicines used for chronic illnesses, but a higher rate of self-medication in the student population. Habits regarding antibiotics showed similar patterns as observed previously. About half of the antibiotics found were not currently in use, supporting the finding that antibiotics stored at home are an important source of drugs used for self-medication. Antibiotic leftovers also raise an issue of medicine non-adherence. Habits regarding drug storage

and disposal were similar to the results obtained in our previous studies examining home pharmacies of the general population. Self-medication is very common among students. Although the majority of medicines are stored properly, they are disposed of in an environmentally unfriendly manner.

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