PRO19.1. KNOWLEDGE, PRACTICES AND ATTITUDES OF COMMUNITY PHARMACISTS TOWARDS PHARMACEUTICAL WASTE MANAGEMENT IN CROATIA: A NATIONAL SURVEY WITHIN THE ERASMUS+ PHARMWASTE PROJECT

K. Fehir Šola[1,2,5], M. Šepetavc[3,5], I. Kummer[4,5], A. Catić Đorđević[6], A. Jovanović[6]

[1]ZU Ljekarna Bjelovar, Bjelovar, Croatia, [2]Faculty of Medicine, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia, [3]ZU Farmacia, Zagreb, Croatia, [4]Faculty of Pharmacy, Charles University, Hradec Králové, Czechia, [5]Udruga Progressus, Zagreb, Croatia, [6]University of Niš, Faculty of Medicine, Department of Pharmacy, Niš, Serbia

Pharmaceutical waste is an increasing environmental and public health concern, particularly due to inappropriate disposal of unused and expired medicines. Community pharmacies represent accessible healthcare settings for patient counselling, collection of pharmaceutical waste and promotion of environmentally responsible medicine use. This study aimed to assess Croatian community pharmacists' knowledge, practices and attitudes regarding pharmaceutical waste management, with emphasis on education, patient-directed materials and perceived system-level needs. A cross-sectional study used a structured self-administered questionnaire. Data included sociodemographic and professional characteristics, previous education, self-assessed knowledge, availability of educational materials and motivating factors for improving pharmaceutical waste management. Descriptive statistics and chi-square tests were applied ($p < 0.05$). Most of 207 participants were women (87.9%), with a mean age of 42.3 years and mean professional experience of 16.9 years. The majority had completed pharmacy studies (86.0%) and worked in community pharmacies (95.7%). Only 6.8% had received formal education or training in pharmaceutical waste management, while 82.1% reported that this topic had not been included in their pharmacy curriculum. Adequate self-assessed knowledge was reported by 37.7%, while 44.4% reported deficient knowledge. Self-assessed knowledge differed significantly by workplace role ($p = 0.036$). Patient-directed educational materials were absent in 87.9% of pharmacies, with significant differences according to education level, workplace role, pharmacy location, region and number of employees. Findings indicate substantial educational and communication gaps in pharmaceutical waste management. Structured continuing education, standardized patient materials and a coordinated national framework are needed to strengthen pharmacists' role in safe medicine disposal and environmental public health.

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