

## ***1.2. Abstract in English***

### ***Title: Prospective survey of respiratory infections in preschool children and parents' attitudes to prevention and self-medication***

***Introduction:*** Respiratory infections have traditionally been at the forefront of morbidity in the Czech Republic. Respiratory infections occur across the entire spectrum of the population and are often an important part of their lives, especially in pediatric patients. It is a disease that, as a rule, in the absence of complications, is not life-threatening and very often the patient can cope the course alone, without special treatment. Greater spectrum and better availability of virological examinations indicate the dominant etiological participation of viruses in the most common respiratory syndromes. The aim of this research was to find out the incidence of respiratory infections in the pre-school age population and attitudes of parents to prevention and self-treatment.

***Methods:*** The pilot survey was carried out in a population of children aged 3 to 6 years attending a collective pre-school facility. Data were collected prospectively in the cold season from October 2018 to April 2019 using two questionnaires for parents of preschool children attending a collective institution: questionnaire A, aimed at collecting data on the child's basic health status and parents' attitudes to prevention and self-treatment; Questionnaire B, focusing on data collection on current respiratory infection in preschool children, its symptoms, course and treatment. An estimate of economic costs was calculated from the data obtained.

***Results:*** 39 respondents and records of 47 episodes of acute respiratory infections in children were included. With the increasing age of children, there was a trend towards less frequent episodes of respiratory infections ( $p \leq 0.03$ ), shorter disease duration ( $p \leq 0.03$ ) with less need for pediatric care than for smaller children. Children of parents with atopic features visited more often the pediatrician ( $p \leq 0,005$ ) and the duration of the disease was longer

( $p \leq 0,047$ ) than in children of parents without atopic features. Children of mothers on parental leave were more likely to have respiratory infections ( $p \leq 0,004$ ) and more frequently to seek pediatric care ( $p \leq 0,017$ ) than those of mothers who worked. Factors of visit of pediatric care and antibiotic prescription were both associated with more frequent episodes of respiratory infections in children ( $p \leq 0,0016$ ;  $p \leq 0,0411$ ) and longer disease duration ( $p \leq 0,0001$ ;  $p \leq 0,0405$ ). The highest risks arose from the established practice of frequent administration and prescribing of over-the-counter cold medicines, which do not have sufficient evidence for their efficacy and safety (decongestants, expectorants, antitussics, antihistamines), to young children for a given age group. Economic losses due to home childcare accounted for most of the cost of cold episodes for both parents and public sources.

**Conclusion:** The established misconduct of the routine administration of over-the-counter cold medicines to children requires appropriate parent education by pharmacists and a change to more appropriate and safer means and methods to alleviate symptoms in children. Investigating the prognostic and risk factors of the environment and lifestyle, including nutrition and preventive food supplements, can be a source of intervention to reduce the morbidity of preschool children to cold or to improve the course of respiratory infections. The data and results presented demonstrate the feasibility of an interdisciplinary approach (epidemiology / health economics) in research on prognostic and risk factors, prevention, self-treatment and health care of common respiratory infections and related socio-economic costs.

**Keywords:** respiratory infections in children, parents' attitude, prevention, self-medication, home care, over-the-counter medicines, cold illness costs