



MARKETING OF ANTIVIRAL MEDICATION

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INTRODUCTION

The treatment of antiviral diseases remains a worldwide problem. Viruses have been and are resistant to treatment or prophylaxis more than any other form of life due to their very nature, as they are totally dependent on the cells they infect for their multiplication and survival [1]. This particular characteristic has made the development of effective antiviral chemotherapeutic agents very difficult. Acute viral respiratory infections (AVRI) are highly prevalent diseases often present in people of all ages with different clinical manifestations and forms and severity that depend of the degree of intoxication and the level of the affected respiratory system. Adenoviruses, Paramyxoviruses: viruses with primary and major respiratory affinity that account for up to 90% of AVRI in children. Acute respiratory infections (ARI) determine 40-60% of early-childhood illnesses and 30-40% of preschool and schoolchildren's illnesses. The frequency of these diseases are 6-7 diseases per year in urban children in overpopulated areas, and 2-3 cases per year in adults. AVRI mortality differs according to the age: 6 000 000 children aged 0-14 years die annually from AVRI worldwide [2, 6].

The lethality for which the viruses are directly responsible it is definitely the case of pandemic influenza, adenoviruses, para-influenza virus infections, and respiratory syncytial viruses (RSV). Appropriate and effective prevention and treatment can minimize the indices of morbidity and lethality of the population. Viral infections are among the most common diseases of humans, accounting more than half of the acute illnesses. The incidence of acute respiratory illness in the United States is from 3 to 5,6 illnesses per person per year [4]. The highest incidence is registered in children under one year of age (6-8% of illnesses per year), with an increased rate until the age of 6, after which it is registered a gradual decrease. The rate of illness in adults is 3-4 times a year. It is estimated that starting with 2/3 up to 3/4 of cases of acute respiratory infections are caused by viruses [2, 3, 6, 7]. The majority of viral infections affects the upper respiratory tract, but can also affect the lower respiratory tract, especially in small children and in certain epidemiological situations. According to World Health Organization data, the most effective method of prophylaxes is vaccination. The human body is very susceptible to viruses, so a proper prophylaxis can be the key of a healthy and long living human. The most commonly symptoms associated with infections caused by the main respiratory virus are intoxication and lining inflammation of the upper respiratory system.

KEYWORDS

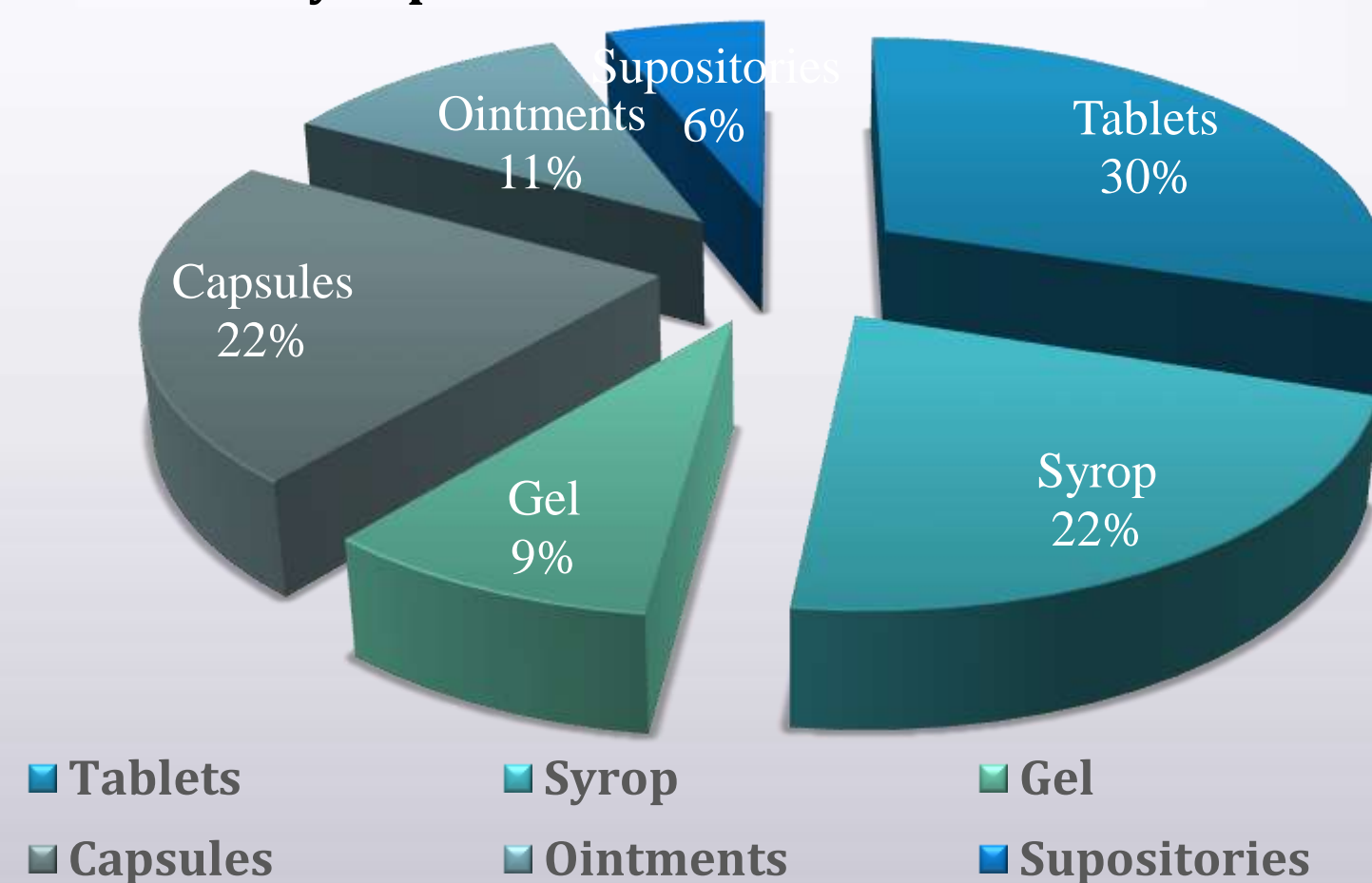
acute viral respiratory infections, marketing, statistics, antiviral products, generic products, original products, manufacturers.

MATERIALS AND METHODS

The National State Registers - the State Nomenclature of Medicines and the Classifier of Medicines - served as study materials. For the purpose of the marketing analysis of the assortment of drugs used in AVRI on the pharmaceutical market in the Republic of Moldova, it was carried out on the basis of a quantitative transferal observational study by means of the sociological questionnaire (the online version using the google forms of application) tool of 100 consumers/patients aged between 18-48 years, both male and female. The study carried out allows a clear assessment to be made regarding the frequency of illnesses during the cold period of the year, the prophylaxis measures applied, the types of medicinal products used, etc. In terms of the marketing analysis of the antiviral product range on the Moldovan pharmaceutical market, we highlighted the following parameters:

- How do the participants of the study initiate their first symptoms of a cold?
- Frequency of illness during the cold season.
- Prophylactic measures applied, drugs used in ARVI.
- Consultation requirement for antiviral drugs in the pharmacy.
- The level of satisfaction of the population used the antiviral products range from Republic of Moldova.
- The choices of manufacturers of antiviral drugs, preferred forms of medicine.
- Impact of the pricing policy on consumer choice.

Figure 1. Total study of preferred forms of medicines



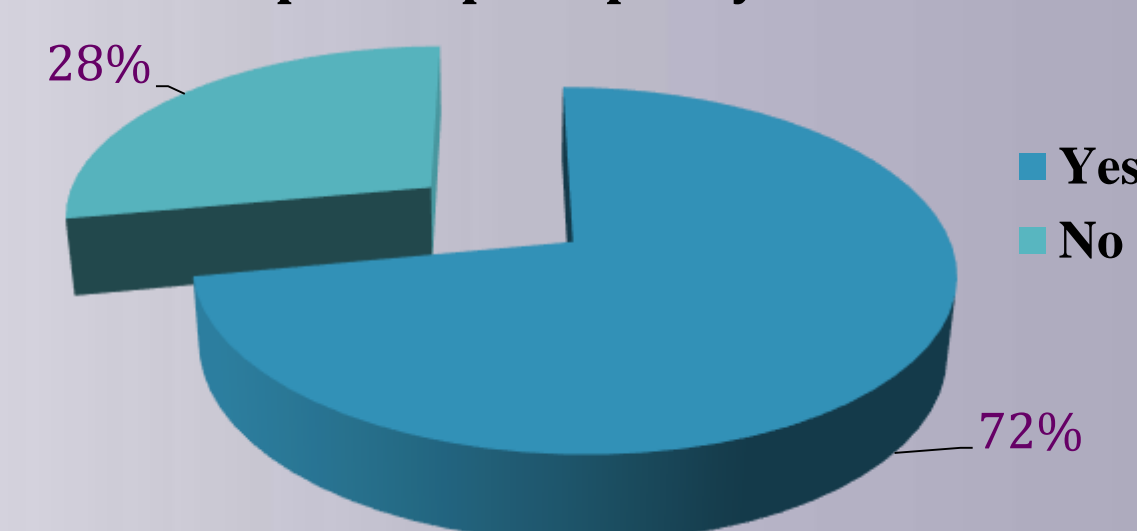
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RESULT

85% of the population opts for uncontrolled self-medication, avoiding a visit to the doctor due to lack of time, financial problems and the long wait to get to the doctor. 32% of interviewees opt for fruit consumption, 19% - the use of antiviral products, 16% - vitamins for prophylaxis and the increase of antiviral immunity. Vitamins are indispensable for colds, the most often used being vitamin C (87%), B group vitamins (B1, B2, B5, B6, B9, B12) which synthesize the antibodies of the immune system, promote the absorption of other vitamins and vitamins. Due to the wide range of antiviral products on the pharmaceutical market in Moldova, which are presented in the most diverse forms of medicine, 31% of the population uses self-medication uncontrolled. The most common pharmaceutical forms are tablets (30%), syrups (22%), capsules (22%) and ointments [5, 6]. (11%) (Figure 1). 76% of the antiviral drugs found on the pharmaceutical market are imported, only 24% are autochthonous. In the questionnaire we noticed that for 72% of those surveyed, price plays a very important role because most medicinal products' manufacturers have high prices due to economic phenomena such as inflation, producer price, raw material costs, transportation, customs clearance, commercial additional cost of the warehouse and pharmacy (Figure 2).

Figure 2. The impact of price policy on consumer choice



CONCLUSIONS

On the pharmaceutical national market on 15.02.2023 there have been registered 33 names of the original antiviral medicines, including 7 names that are used in acute respiratory viral infections. There are also 32 generic products and 6 products of plant origin used in the treatment of acute viral respiratory infections. Among the most known producers of antiviral products are: Farmaprim S.R.L, I.M. Farmaco S.A, SC Balkan Pharmaceuticals SRL, Eurofarmaco SA, RNP Pharmaceuticals SRL, although 80% of such products are imported, thus our country's pharmaceutical market is mostly supplied with these products by the following countries: Slovenia, Germany, United States of America, Belgium, India, Egypt, Belarus, Ukraine, Romania, Switzerland, Cyprus, Russia. The consumer preferences in selection of an antiviral product are significantly influenced by the price of the medicines, the manufacturer, the form of issue, the organoleptic properties, the nature of the medicine, the possibility to use in the pediatric practice.