

## Demand on the Pharmaceutical Market in the Conditions of the COVID-19 Health Crisis

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### Abstract

*The study aims to identify the evolution of the pharmaceutical market during the health crisis, determined by the appearance of COVID -19 diseases. The purpose of this study is to highlight the sales dynamics and the main economic and financial indicators as a result of infections with the new coronavirus SA RS-CoV-2. Thus, the Romanian pharmaceutical market showed a change in the dynamics of the demand for pharmaceutical products, for the treatment of this infectious disease but also for the prevention of contacting this virus. In the period since the outbreak of this epidemic, the demand has shown both quantitative and value changes.*

**Key words:** drug market, crisis, Covid19, pharmacies, profit

**J.E.L. classification:** I11, L65, P52

### 1. Introduction

Periodically, human society faces health crises due to the manifestation of infectious diseases, caused by the action of certain viruses. Depending on the evolution and dynamics of the spread of viruses, diseases manifest themselves locally, regionally or worldwide, the so-called pandemics.

Well known is the health crisis at the beginning of the last century, caused by the manifestations of the most widespread epidemic, known as the Spanish flu, which affected the entire planet and which resulted in a death rate of 5-10% of the population. After 100 years, the planet is once again facing a health crisis caused by the action of the new coronavirus SARS-CoV-2.

This pandemic also affected the Romanian economy through various channels with significant implications in the field of satiety.

Coronaviruses can cause disease in humans and animals. Respiratory infections can cause colds as well as very severe respiratory illnesses such as Middle East Respiratory Syndrome (MERS), Severe Acute Respiratory Syndrome (SARS), or the new coronavirus that causes COVID-19 infectious disease. Appearing at the end of 2019, in the outbreak in Wuhan, China, this disease was not known. The condition is manifested by fever with headache, fatigue, nasal congestion, sore throat, dry wear, diarrhea, poor breathing.

As shown in the paper „Features, Evaluation, and Treatment of Coronavirus,, (Casella *et al*, 2020), the vast majority of people infected with the new coronavirus do not develop any symptoms, respectively they are asymptomatic and recover without drug treatment. There are also situations when the disease becomes extremely aggressive, when patients suffering from CONVID-19 also have other conditions such as diabetes, high blood pressure, heart disease, when they could even lose the fight with life. Under these conditions, patients who have difficulty breathing, fever and cough, seek outpatient drug treatment or hospitalization.

## 2. Theoretical background

The appearance of the new human coronavirus has been talked about since 2002, when this virus detected in China was a worldwide concern. Thus, according to a WHO study, in 2003, more than 8,000 people died from being diagnosed with severe acute respiratory syndrome (SARS). Thus, in September 2003, the Institute of Medicine (IOM) on microbial threats initiated the workshop "Learning from SARS: Preparing for the next outbreak of disease", which identified the causes of the virus, detection, spread and limitation of SARS, possible policy responses the epidemic, the economic consequences, basic research of coronaviruses, preparation for a possible recurrence of SARS-CoV.

As it is known, the beginning of 2020 is facing one of the biggest pandemics, which is far from ending in the next period according to the estimates presented in the article "Estimating the effects of non-pharmaceutical interventions of COVID-19 in Europe" (Flaxman *et al*, 2020).

## 3. Research methodology

The objective of this study is to evaluate the way in which the Romanian pharmaceutical market evolved in the period following the appearance of this COVID-19 disease, determined by the infection with the new SARS-CoV-2 coronavirus.

At the same time, the objective of the study is to highlight in the pharmaceutical entity, the dynamics of sales from the release of pharmaceuticals for the prevention of infection with this virus and for the treatment of this disease. The study aims to highlight the number of units released, the commercial margin achieved, the financial contribution of patients to the purchase of pharmaceutical products for the prevention and treatment of this disease.

The research method took into account the direct, selective analysis of the release of some pharmaceutical products, medicines or food supplements administered for the prevention or treatment of this disease, in the period from the appearance of the sanitary crisis. The materials used consisted of analytical sheets obtained from the program of evidence and management of pharmaceutical products that formed the basis of research.

## 4. Findings

The global pharmaceutical market has passed the period in which the patents held for some original pharmaceutical products have expired, which has negatively influenced sales.

The same period is influenced by the entry into the US pharmaceutical market of a significant number of innovative products, so that they have contributed to increasing the value of the pharmaceutical market.

The phenomenon of increasing the volume of the pharmaceutical market is present even in the regions where the access to medicines is less limited, due to the rather high prices.

According to the preliminary report, the Pharmaceutical Market Research Institute Cecedim Romania estimates that an annual volume of drug sales of almost 4 billion euros for 2019, the Romanian market continues to consolidate in its entire value chain and even needs to align with the trends manifested globally. In this context generated by the increased demand for medicines and health equipment, generated by the Coronavirus pandemic, analysts in the field estimate that, in 2020, the Romanian pharmaceutical industry will record a record in business throughout the value chain, respectively manufacturers-distributors- pharmacies. The local pharmaceutical industry, which is at the forefront of the fight against coronavirus, will contribute both to ensuring the health of the population and to the stability of the local national economy.

In the context of the COVID-19 crisis, the Romanian Association of Industrial Drug Producers estimates that in 2020 there will be a decrease in profitability, due to the reduction of the market share of generic drug producers, while reducing revenues caused by the increase in clawback tax, as well as rising prices for raw materials and protective equipment.

With the declaration of the coronavirus pandemic, the pharmaceutical industry of generic drugs has faced the cessation of exports of drugs and pharmaceuticals and the possibility of capping the prices of drugs, even over-the-counter drugs, which have free prices, which will influence the situation their economic and financial situation.

In the period since the onset of the pandemic, in addition to the measures taken and applied by the authorities to limit the spread of coronavirus, the population has sought solutions to solve health problems. Thus, stimulated by the aggressive advertising campaigns of the main players on the pharmaceutical market, of the products destined and released for the prevention and treatment of this COVID-19 disease, the patients turned more and more frequently to the pharmacies.

Due to the ignorance of the action of this virus, the patients were supplied with medicines and nutritional supplements, even if many of them were not affected.

The population purchased, without a prescription, pharmaceuticals and even devices, all to be prepared in a possible COVID disease 19.

Considering the objective of the study, we analyzed the sales of pharmaceutical products for the period March 12, 2020 - November 30, 2020. The study focused only on the most widely released drugs and supplements to boost immunity and treat this disease COVID 19.

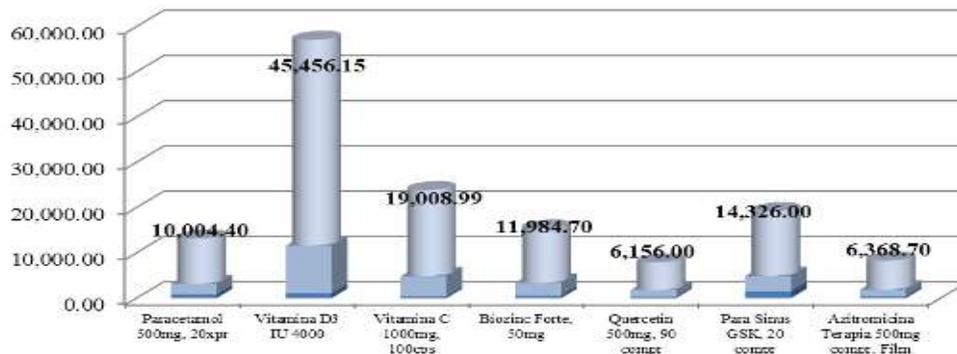
In the table below, we presented the situation of releases for the period indicated above.

Table no. 1 Situation of sales of pharmaceutical products for coronavirus treatment, between March 12 and November 30, 2020, by a community pharmacy

No	Pharmaceutical product name	Supplier price	Sale price	Quantity released	Trade margin	Sale value
1	Paracetamol 500mg, 20xpr	9.70	12.60	794.00	2,302.60	10,004.40
2	Vitamin D3 IU 4000	34.80	45.23	1,005.00	10,482.15	45,456.15
3	Vitamin C 1000mg, 100cps	53.56	69.63	273.00	4,387.11	19,008.99
4	Biozinc Forte, 50mg	16.90	21.95	546.00	2,757.30	11,984.70
5	Quercetin 500mg, 90 tablet	83.07	108.00	57.00	1,421.01	6,156.00
6	Para Sinus GSK, 20 tablet	7.30	9.50	1,508.00	3,317.60	14,326.00
7	Azithromycin Therapy 500mg tablet. Film	13.80	17.94	355.00	1,469.70	6,368.70
<b>Total</b>					<b>26,137.47</b>	<b>113,304.94</b>

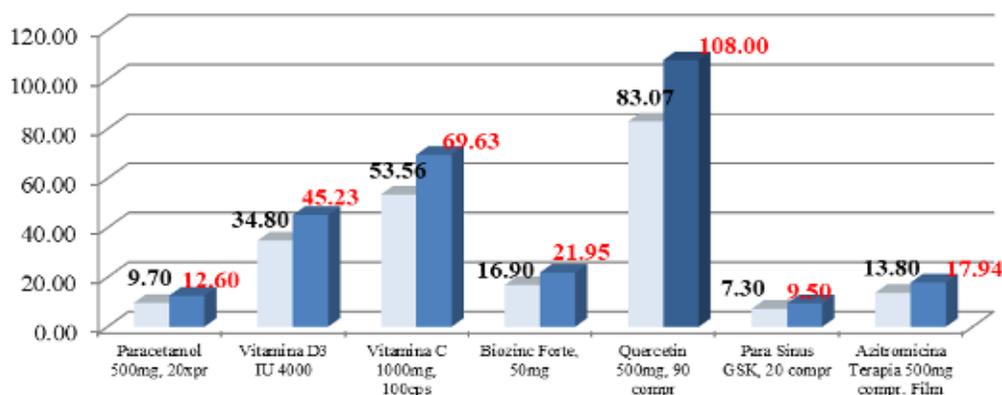
Source: Pharmacy GF ltd, Own processing, November 30, 2020

Chart no.1 Evolution of sales for the first 7 products released between March 12 and November 30, 2020, by a community pharmacy (lei)



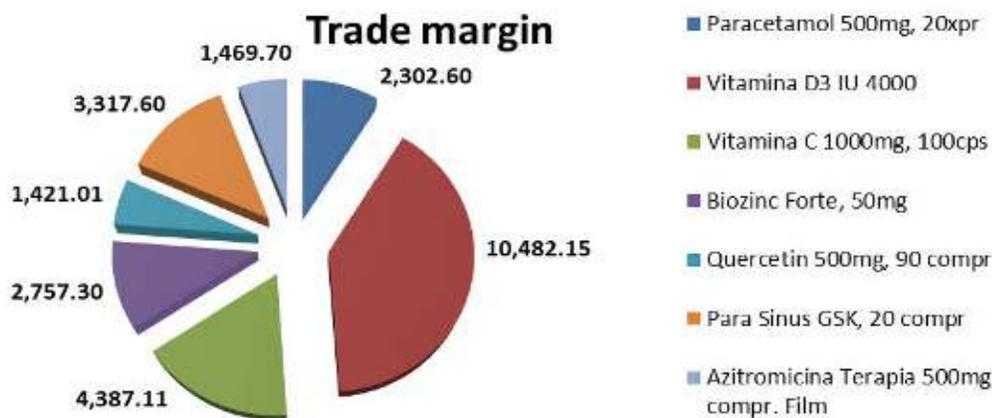
Source: Pharmacy GF ltd, Own processing, November 30, 2020

Chart no.2 Comparative evolution of the entry price / sale price of products issued between March 12 and November 30, 2020, by a community pharmacy (lei)



Source: Pharmacy GF SRL, Own processing, November 30, 2020

Graph no.3 Evolution of the amounts obtained from the commercial margin for the products released in the period 12-March-30 November 2020, by a community pharmacy under study (lei)



Source: Pharmacy GF SRL, Own processing, November 30, 2020

As we can see, from the study conducted only on a number of 7 pharmaceuticals, drugs and food supplements released in a community pharmacy, it is found that this health crisis, caused by this unknown coronavirus has determined a certain attitude consumption of population.

The data presented in the 3 graphs above are related to a request for release without a prescription. Under these conditions, the population influenced by the aggressive advertising of pharmaceutical companies, consumes preventively, without a recommendation from some specialists, pharmaceuticals to increase immunity and even to treat this disease.

Significant is the level of commercial margin achieved by selling food supplements such as Vitamin D3 with 2000, 4000, 5000 IU, Vitamin C of 1000 mg.

The release of drugs to treat less severe forms of COVID 19, such as Paracetamol 500 mg (794 boxes), ParaSinus (1508 boxes) or Azithromycin 500 mg (355 boxes), may be considered essential for this study period.

The level of income achieved in the period studied only by the 7 products is significant, compared to the same period of 2019, when it can be estimated several times higher.

To date, we cannot yet speak of the existence or placing on the global pharmaceutical market of a specific vaccine or antiviral drug to prevent or treat COVID-19 disease.

The population has proceeded to purchase and administer food supplements dedicated to ensuring and increasing immunity in most cases without these being recommended by a specialist.

Affected patients must carefully manage their symptoms, under the assistance and guidance of specialists, most recovering from care received in the early stages of the disease and with financial coverage from their own resources.

Patients with serious illnesses require services and treatment according to an adequate medical protocol in a hospital dedicated to the treatment of COVID 19, with a financial effort, specialized labor and material resources of protection and consumables, fully funded by that state.

Possible vaccines and some specific drug treatments are being investigated. These are tested by clinical trials. WHO coordinates efforts to develop vaccines and drugs to prevent and treat COVID-

## 5. Conclusions

According to studies presented by pharmaceutical market research institutions, the local pharmaceutical industry will be the first of the segments least affected by the pandemic, along with the food industry, health and welfare, IT&C, agriculture, energy and gas and water distributors and sanitation.

Globally, several pharmaceutical companies have researched and investigated this virus and are trying to produce specific drugs to treat this disease but also a suitable vaccine, which is to be placed on the world market.

The financial effort at the mental level to treat and vaccinate the population against this deadly virus is considerable.

According to a report by the European Court of Auditors, published on September 24, 2020 (Agerpres), the financial impact in the euro area of the COVID-19 pandemic is much higher than that of the economic crisis of 2008 and 2012, and the economic shock wave continues to spread with multiple problems still unresolved, as a result of potential unknown risks but also health policy deficiencies.

The inadequacy of policy instruments both for the euro area and at the level of each EU member state verifies the so-called resilience of its economic and financial architecture.

The health crisis caused by the 2020 pandemic runs the risk of deepening economic disparities between Member States, as well as the risk of a significant deterioration in budget deficits and public debt, and that this puts considerable pressure on public spending and revenue.

It can be appreciated that the existence of a high level of debt in a Member State before the pandemic accentuates its vulnerability and has an important influence on its ability to implement policies, to support economic entities.

The WHO is currently coordinating efforts to develop and authorize and market vaccines and medicines for the prevention and treatment of COVID-19, as the only way to eliminate the negative effects on the world economy.

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