Management of the Pharmaceutical Entity's Resources in the Conditions of the Sanitary Crisis of COVID-19

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Abstract

The aim of the paper is to identify the peculiarities of the management of the pharmaceutical entity's resources in the conditions of the health crisis, caused by Covid disease 19. The global uncertainty regarding the dynamics and evolution of the pandemic generated by SARS CoV 2 virus of the resources made available to them. If remote work has been a life-saving solution for many fields of activity, for the pharmaceutical field, the adoption of a flexible work schedule could not be considered a variant for the efficient use of the employed resources. Thus, in strict correlation with the still unknown trend of the Health Crisis, an adequate management of resources in pharmaceutical entities is an aspect that should not be neglected given the specific field of activity, respectively participation with the state in ensuring the health of the population.

Key words: management, resources, pharmacy, Covid19 disease, efficiency, profit
J.E.L. classification: I15, L65, P46

1. Introduction

With the onset of the pandemic, pharmaceutical companies, like all other fields of activity, had to change the way they organize the functional processes and manage the resources used to achieve the object of activity and the purpose for which they operate.

Thus, considering that the purpose of the pharmaceutical entities is their contribution, together with the state, to ensuring the health status of the population, we must not ignore their general objective.

As is well known, the objective of each entity is to carry out activities efficiently, through the rational use of resources employed, respectively profit, as the only condition for perpetuating the development of the entity and society in general.

In the period following the outbreak of the health pandemic, the entities have adapted to the conditions arising from the restrictions imposed on the development of activities, by implementing digital and technological solutions that allow operation at the highest possible parameters.

All this required decisions to be taken by the management of pharmaceutical entities, which resulted in unforeseen investments in financial, human, information and other resources, the result of which led to the efficiency of all processes. These decisions materialized almost in real time in solutions applicable both within the entity and in solutions applicable to the external environment, respectively in relation to patients, pharmaceutical and service providers, in relation to other employees, state authorities and others. Thus, even though the pharmaceutical field is highly regulated in terms of production, distribution and marketing of pharmaceutical products, many companies have implemented processes, applications and integrated platforms that are easy to access and use, ensuring the use and management of maximum efficiency. all resources employed.

The need for optimal use of resources through debureaucratization, digitization and technologicalization of some processes have led to the elimination of resource waste channels in all forms. As it is known, the beginning of 2020 began worldwide with one of the major health crises caused by the spread of the SARS CoV2 virus, a crisis that is far from over in 2 years. Even though, starting with December 2020, the antidote that could still reduce the effects of the disaster caused by this virus, determined the launch on the pharmaceutical market of some vaccines with efficacies of up to 90% -94%, reaching the 3rd dose of administration, at the end of 2021, the pandemic is at the end of wave 4 and even the beginning of wave 5.

Mutations in this rapidly spreading virus indicate that it cannot be eradicated in the near future, which will directly affect the research, production and marketing of vaccines that respond to new changes. All these phenomena will determine a certain behavior manifested by the management of the entities on each link of the value chain.

2. Theoretical background

As is well known, the essence of management science is generally the study of the processes and managerial relationships developed in an organization. Thus, the content and dynamics of management within the pharmaceutical entity is based on the study of processes and managerial relationships specific to this field. They aim to discover the principles and legal provisions governing the pharmaceutical business, as well as to build new systems, methods, techniques and procedures that will increase the competitiveness of the use of resources in this market.

The managerial activity in the pharmaceutical entities is based on the activity regarding the use of human, material, informational and financial resources. The success of this activity includes a series of stages arranged in a logical sequence in which the objectives of the organization and the embedded subsystems are established (departments, compartments, services, offices, etc.), the resources and means necessary to achieve them and coordinate the activity of human resources, in order to obtain the highest possible economic and social efficiency.

The structure of the management process is determined by the functions or attributes of the managers, namely: the function of forecasting, organizing, coordinating, training, monitoring / evaluating.

The managerial process in the pharmaceutical field includes important phases, namely the forecast phase (during which the prediction function is manifested in the predilection), the operational phase (in which the functions of organization, coordination and training are mainly exercised) and the measurement phase. interpretation of the results, in which the control-evaluation function is mainly manifested.

All these characteristics generally valid for the management activity on the pharmaceutical market were applicable and present especially in the conditions of the health crisis caused by COVID 19 disease, as will be presented below and concretized in relevant indicators for each resource used.

3. Research methodology

The objective of this study is to highlight the effects of management activity in the efficient use of resources involved in various pharmaceutical entities and the evolution of the Romanian pharmaceutical market in the period after the COVID-19 disease, caused by infection with the new SARS-CoV-2 coronavirus.

The research method considered the direct, selective analysis of the effects of the use of resources, which were directly influenced by the manifestations determined by the prevention or treatment of this disease, in the period after the health crisis.

The materials used were those provided by statistics from institutes specializing in research and analysis of the evolution of the global pharmaceutical market during this pandemic period.

4. Findings

Starting from the resources used to achieve the object of activity in the pharmaceutical entities, we will try an approach of their management for each of the resources.

Considering the human resource as the most important, the one that activates the other resources, we will start with the presentation of its specificity within the pharmaceutical entities.

The approach of the pharmaceutical service as part of the national health system can sometimes be assimilated with social services, which leaves its mark on the role of the pharmacist in this system.

In the conditions of the market economy more and more the pharmacist is often confused with a trader in the true sense of the word. We must not ignore the role of the pharmacist in streamlining the management of the drug as a result of his scientific and multidisciplinary training.

Thus, the role of the pharmacist in the administration must be established, respectively the position that the pharmaceutical coordination system has within the health system, in the formulation and implementation of the drug management policy. Pharmaceutical management includes the selection of essential medicines, quality assurance, their purchase, distribution and rational use, hence the need to establish an educational policy in the field of workforce training.

The management of the pharmaceutical workforce must take into account the fact that the pharmacist is the one who advises the patient, prescribes over-the-counter and over-the-counter drugs, checks the legality, safety, correctness of the prescription, and limits self-medication.

In addition to the social side, the role of pharmacists in achieving the economic side of achieving the object of activity must be specified. This economic side is reached when the pharmacist monitors the treatment in case of minor symptoms or disorders, the release of over-the-counter drugs, on which occasion he transfers the costs of the national health system to the patient but also in the sale of parapharmaceuticals and medical devices.

Thus, the work of pharmacies in the current market relations, influenced by the effects of the crisis in the field of health, changed the requirements for an employee in such an entity, increased the importance of an innovative attitude towards the work performed but also a high professionalism. the requirement of the competitive environment on the pharmaceutical market.

The COVID -19 crisis, materialized in the unexpected increase in sales, amplified the key role of the staff in completing the medical act, hence the investment in motivating them in various forms as the main factor in increasing the financial efficiency of the entity and improving service to his patients.

The efficient use of labor in pharmacies and implicitly motivating it by fulfilling the sales plan for certain pharmaceuticals, requires the development of sales schemes in complex therapies and consequently, they can be sold together, for example: antibiotic + vitamins + probiotic or cold remedy + vitamins + immunomodulators, etc.

Information resource in the pharmaceutical system refers to information technologies but also to the circulation, collection, processing, transmission, storage and distribution of pharmaceutical information. An efficient management of the IT resource will ensure the information necessary to substantiate the strategic and managerial economic policy decisions that will be the basis for substantiating the data necessary for the elaboration of the economic growth models of the pharmaceutical unit. Monitoring the use of information resources as well as human and financial resources has led to the emergence and imposition of the concept of "information resource management" and managers are required to manage information as a resource. Pharmaceutical information has become increasingly expensive because it is itself the basis of drug production, of competition in the pharmaceutical market.

Regardless of the strategy chosen and the resources invested, the current context of the healthcare crisis created by COVID-19 disease is very favorable for the Pharma field and confirms the upward trend in sales which is expected to increase in the near future. This trend has also been influenced by the expansion of online commerce as a way to respond to patient demand.

The year 2020 has come with the biggest challenges for the pharmaceutical market and can be considered one of the most difficult in recent times, including the management of all the resources involved in achieving the purpose of these entities. The ignorance of the details about the new coronavirus led to precautions being taken by the population to ensure their health. The need of the population for the need for medicines in the fight against the pandemic is very well known. As a precautionary measure, this pandemic phenomenon has led to the purchase of drugs dedicated to the treatment of this disease COVID-19, even if not the entire population has been affected to the same extent, from the beginning.

Thus, the management on the entire value chain has faced a training of all resources to respond both quantitatively and qualitatively to the consumption needs of the affected population. This phenomenon has led to an increase in the demand for specific drugs to prevent and treat this disease.

The restrictions imposed by limiting the spread of the SARS-CoV-2 virus have come with major changes in production strategies and especially those of direct sales to the population. This has led to a substantial increase in pharmacy revenues. These revenues were supported by the sales of online pharmacies but also by those with normal sales. It was the pandemic that accelerated the process of digitization of services in the healthcare industry due to the imposed physical distance measures. This virtual approach of patients has created a new sales channel for the pharma network.

In the context of the health crisis, the investments made to make more efficient the use of material, human, financial and informational resources for the new type of online customer, will continue to exist even after the end of the pandemic, the advantages of this type of trade are already known.

According to the data presented by the research company, Cegedim Romania, the results of online sales generated significant business growth, even if the pharmacies continued to be open during the lockdown period, the average number of products listed in online pharmacies was over 19000, respectively a 2820% increase in a pharma site compared to the previous period, thus indicating a wide variety of products offered.

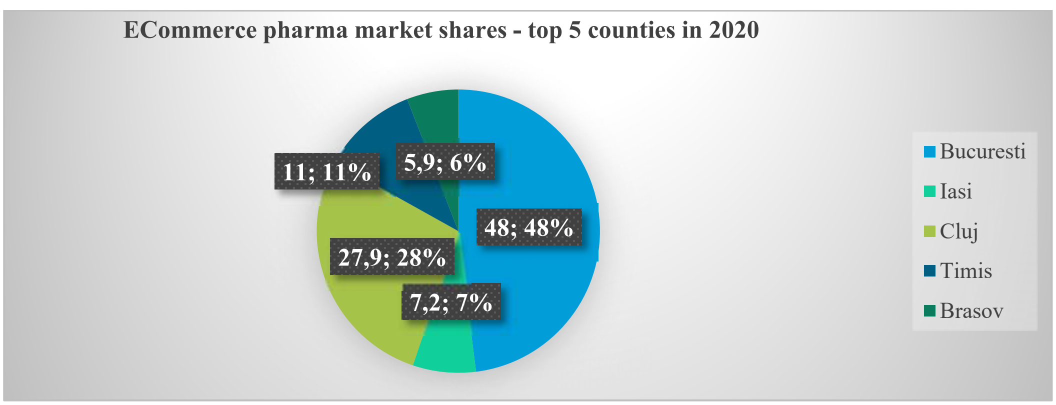
During the analyzed period, in the top of medicines sold online were over-the-counter medicines, food supplements to increase immunity, dermatocosmetics, protective materials, protective masks, disinfectants, medical devices for determining blood oxygen, protective gloves.

Thus, in order to maximize revenues, online pharmacies needed a certain sales strategy that can be adapted in real time, the same involvement as a physical pharmacy.

Regardless of the strategy chosen and the resources invested, the current context is very favorable for the Pharma field and confirms the upward trend that will intensify in the future. The regions with the largest share of online orders are Bucharest and the counties of Cluj-Napoca, Timiş, Iași and Brașov. This distribution is in line with the geographical distribution of online orders and for stores in other fields (fashion, home & deco, kids & toys) and shows the opening of these regions to eCommerce.

According to a study conducted by ContentSpeed, a specialized platform for specific requirements in the pharmaceutical field, regarding the eCommerce pharma market shares, Bucharest and Cluj have important shares, as shown in the chart below.

Graph no.1. ECommerce pharma market shares - top 5 counties in 2020



Source: Content Speed, own processing

Throughout the pandemic, patients have increasingly appreciated the ability to check online on their own sites or even to book in pharmacies, where they can find certain drugs in stock.

The TeleFarmacie module is also used, through which a dedicated form is available on the website for sending the prescription to the pharmacy. It also includes integration with POS, management solutions or the internal application that manages such applications.

Throughout the pandemic, since its inception in 2020, until now, the population has turned to pharmacies for the purchase of pharmaceuticals, which has led to a considerable increase in sales, hence the place among those who earned from the medical crisis, whether we are talking about independent pharmacies, chain pharmacies or drug distribution companies.

According to financial information published for 2020, the turnover of pharmaceutical companies has increased compared to the level recorded in 2019.

In the pandemic year 2020, based on the data published on the specialized sites and the Cegedim Romania reports, the first 14 pharmaceutical companies on the local pharmaceutical market registered a turnover of 3.97 billion euros, increasing by 2.97% compared to year 2019, with a net profit of 88.6 million euros, respectively 41% higher than the previous year.

If we analyze the structure of the released products, we find that during this period, the population turned to pharmaceuticals of strict necessity, and especially those related to the prevention of coronavirus.

Even if the year 2020 was a difficult one from the point of view of the organization but also of the use of financial, human and informational resources in the open circuit pharmacies, it can be appreciated that this field is among the winners of the pandemic.

Thus, the result of the efficient use of resources on the pharmaceutical market has materialized in maintaining the growth trend of sales and in 2021, significant are the volumes (number of boxes) recorded by major companies in the pharmaceutical market, as shown in the following table.

Table no.1 Top 20 companies by volume of medicines released in the period July 2020-June 2021

Nr. crt	**Pharmaceutical companies**	**Nr. released boxes (millions of boxes)**	**Market share (100%)**
1.	ZENTIVA (LABORMED ŞI ALVOGEN)	71,3	11,4
2.	SUN PHARMA (Terapia)	59,1	9,4
3.	SERVIER	36,2	5,8
4.	SANOFI	29,9	4,8
5.	KRKA D.D.	28,6	4,6
6.	GLAXOSMITHKLINE	28,4	4,5
7.	VIATRIS	25,4	4,1
8.	ANTIBIOTICE IAŞI	25,0	4,0
9.	BIOFARM	21,4	3,4
10.	GEDEON RICHTER	19,7	3,1
	TOTAL 10 COMPANII	**345,0**	**55,0**
11.	MENARINI	19,0	3,0
12.	NOVARTIS	18,8	3,0
13.	RECKITT BENCKISER	14,2	2,3
14.	ASTRAZENECA	12,6	2,0
15.	TEVA	11,1	1,8
16.	MERCK KGaA	10,8	1,7
17.	NATUR PRODUKT YDROVIT	10,1	1,6
18.	BAZER AG	9,6	1,5
19.	MERCK & CO	8,6	1,4
20.	FITERMAN PHARMA	8,0	1,3
	TOTAL 20 COMPANII	**467,8**	**74,6**
	TOTAL PIAŢĂ FARMACEUTICĂ	**626,8**	**100**

Source: Cegedim Customer Information, own processing

According to the results of the Pharma & Hospital Report study, Cegedim Customer Information estimates that between July 2020 and June 2021, the volume of medicines delivered to patients in Romania was 626.8 million boxes, an increase of 0.6% compared to consumption in July 2019 - June 2020. The total number of treatment days increased by 8.7%.

Thus, Zentiva Corporation ranks first with sales of 71.3 million units, followed by Sun Pharma (including Therapy) with 59.1 million units and Servier (including Egis) with 36.2 million units.

The list of the top 10 companies is completed by Sanofi (29.9 million units), Krka (28.6 million units), GlaxoSmithKline (28.4 million units), Viatris (25.4 million units), Antibiotice Iaşi (25.0 million units), Biofarm (21.4 million units) and Gedeon Richter (19.7 million units).

Table no.2 Top 20 companies by sales of medicines released between July 2020-June 2021

Nr. crt	Pharmaceutical companies	Sale (millions of lei)	Market share (100%)
1.	SANOFI	1046,8	5,4
2.	NOVARTIS	977,3	5,1
3.	ZENTIVA (LABORMED ȘI ALVOGEN)	861,6	4,5
4.	SUN PHARMA (Terapia)	770,0	4,0
5.	SERVIER	767,8	4,0
6.	ASTRAZENECA	707,8	3,7
7.	BRISTOL MAYER SQUIBB	703,7	3,6
8.	GLAXOSMITHKLINE	670,0	3,5
9.	VIATRIS	580,2	3,0
10.	MERCK & CO	573,9	3,0
	TOTAL 10 COMPANII	**7658,90**	**39,7**
11.	HOFMANN LA ROCHE	531,3	2,8
12.	PFIZER	525,1	2,7
13.	GILEAD SCIENCE INC,	509,4	2,6
14.	BAYER AG.	498,0	2,6
15.	JOHNSON &JOHNSON	477,4	2,5
16.	ELI LILLY	433,8	2,2
17.	MENARINI	396,6	2,1
18.	ANTIBIOTICE IAȘI	346,8	1,8
19.	KRKA D.D.	334,7	1,7
20.	RECKITT BENCKISER	322,0	1,7
	TOTAL 20 COMPANII	**12034,0**	**62,3**
	TOTAL PIAȚĂ FARMACEUTICĂ	**19.306,9**	**100**

Source: Cegedim Customer Information, own processing

Thus, from the point of view of the value of the medicines released on the first place, Sanofi is with 1046.8 million lei, followed by Novartis with 977.3 million lei and Zentiva with 861.6 million lei.
The proof that the resources of the pharmacies were used with maximum efficiency during the analyzed period is also demonstrated by the structure of sales by release segments, respectively by retail and by hospital, as the information in the following table is presented.

Table no. 3 Volumes and sales of medicines released between July 2020 and June 2021

Release channel / segment	**Total boxes (mil.)**	**Market share (100%)**	**Total sales (mil.)**	**Market share (100%)**
RETAIL	604,6	96,5	16663,0	86,3
- *RX*	363,9	58,1	11753,3	60,9
- *OTC*	240,7	38,4	4910,0	25,4
HOSPITAL	22,2	3,5	2643,9	13,7
Total market	**628,8**	**100,00**	**19306,9**	**100,00**

Source: Cegedim Customer Information, own processing

As can be seen, the release segment represented by pharmacies in the analyzed period, has a market share of 96.5% of the volume of dispensed boxes and 86.3% of sales related to the release segment owned by the hospital, where the level is extremely reduced by 22.2% of the volume.

Thus, we can appreciate that the population resorted to the consumption of medicines directly from pharmacies and less hospitalization was agreed during this pandemic period. These results represent the effect of the restrictions imposed as well as the detention of patients to be admitted to hospitals for the treatment of chronic diseases.

5. Conclusions

The summary of this information resulting from the study leads us to outline a picture of the pharmaceutical entity in terms of efficient use of human, information and financial resources in the conditions of a deep global medical crisis.

Thus, ensuring the stability of the pharmaceutical market both in terms of quantity and quality and the successful operation of a pharmaceutical entity in a competitive environment, depends on an efficient management of all resources involved in achieving the object of activity.

Providing pharmaceutical services according to the requirements of the local or regional pharmaceutical market, requires an adequate management of human resources, the only one that sets in motion the other resources involved in the process of achieving the object of activity, hence the need to find appropriate motivation strategies. employees.

Thus, the personnel policy must be an integral part of all the management activities and production policies of the pharmaceutical entity, hence the need to adapt it to the new conditions of the pharmaceutical market relations.

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