RUSSIAN FARMACEUTICAL MARKET 2021

GROUP DSM

Introductory remarks

Sergey Shulyak
General Director DSM GROUP

The pharmaceutical market is not only about drugs, revenues, pharmacies, public funding, logistics and production. It is, above all, about social responsibility in our industry, which remains a fundamental element. It is becoming apparent right now. Provision of drugs and public funding for the treatment of COVID-19 are the main drivers for the growth of the market during the pandemic.

Earlier, we always highlighted events that characterized the previous year and triggered changes on the market. In some years, it was a crisis; in other years, it was an increase in exchange rates and, as a result, high inflation, bankruptcy or, on the contrary, appearance of major market players. Each year, it was something new.

Now, for a second consecutive year, we speak only and for the most part about the coronavirus and everything associated with it: achievements in vaccine science, failures due to excess mortality, new virus variants, and so on and so forth, and 2021 never seemed to have had a grand finale.

We have prepared for you a traditional 2021 pharmaceutical market report with key figures and facts. Making forecasts for 2022, we are anticipating changes! What will they be like? We'll see together.

Table of contents

DSM Group

General Director
Sergey Shulyak

Director of the Department of Stategic Research
Julia Nechaeva

Analyst
Irina Sharapova

Head of PR
Zhalya Gadzhieva

Analytical Report
Russian Pharmaceutical Market
Results of 2021

Address:
7, Building 2, 5th Yamskogo Polya Street, Moscow, 125124

Tel:
+7 (495) 780-72-63,
+7 (495) 780-72-64

www.dsm.ru, www.dsmgifts.ru

Summary

Little seems to have changed. Pandemics do not end so fast. On the contrary, in 2021 the spread of the coronavirus infection was even more extensive: mutated variants caused a new surge in the number of infected people. As a result, according to official statistics only, the number of infected people in Russia increased by 1.3 times against 2020, and the death rate grew by 3.2 times.

There were fewer restrictions; the focus was now on the vaccination and appropriate pharmaceutical treatment. In consequence, the growth of the pharmaceutical market reached its peak since 2013, and the public segment never saw such high dynamics (except, perhaps, in 2005 when a new market segment appeared – publicly funded drug reimbursement).

It is remarkable that according to the surveys of the Russian Public Opinion Research Centre (VTsIOM), the coronavirus is not the only item on the agenda for the year (38%) – 34% of respondents are concerned also about rising prices. Indeed, the overall inflation across the country came to 8.4% (the peak level since 2015). The price index for drugs was noticeably lower – 3.7%. There are several factors accounting for that: prices for drugs rose mainly at the end of 2020; half the available range is controlled by the state; in 2021, competition became a key element (considering also the "new channel" of online sales), which was another factor that held down the prices.

Most of the laws that, among other things, prevented the deterioration in medicine provision were adopted back in 2020 – for example, the law to freeze drug prices during epidemics, the law allowing distance selling of drugs, and the introduction of procedures for the accelerated registration of drugs and medical products in case of emergency.

Further to the issue of safety of medicine provision, in 2021 the government approved rules for the calculation of compensations for the use of an invention without the patent holder's consent, which means that at the time of epidemics and pandemics Russian manufacturers are allowed to launch, with the authorization of the Government of Russia, equivalents of original drugs before the expiry of the patent term.

Another draft law that can grant preferences to Russian companies suggests a "one's company, two's none" mechanism. It is a more formal variation of the already existing "two's company, three's none" rule. In bidding, priority will be given to full-cycle manufacturers that use substances synthesized in EEU. The mechanism will first apply to the procurement of 15 medications from the list of strategically important drugs.

All these legislative initiatives are intended to promote the achievement of one of the fundamental objectives according to the Pharma-2030 Strategy, namely, localization in Russia of not only drugs but also of active pharmaceutical ingredients used in their production.

In 2021, Russia's pharmaceutical market was worth 2,295 billion roubles (without taking into account Covid-19 vaccines), which is 12.7% higher than in 2020. Considering the funding of the coronavirus vaccination campaigns, the market exceeded 2,374 billion

roubles (+16.5% to 2020). Sales of drugs in volume terms dropped by 6% to come to 5.6 billion packages.

For a second consecutive year, public purchases of drugs continue to be a growth driver owing to additional funding of national projects and allocation of funds for purchases of drugs for the treatment the coronavirus infection. The highest growth in 2021 was in the purchases of drugs for HCI. The basic growth driver were the purchases of necessary drugs recommended for the treatment of Covid-19 (142 billion roubles over the year, a 30% increase in the segment).

Special mention must be made of a new project launched in 2021, namely, the “Krug Dobra” (“Circle of Kindness”) foundation for support of children, which purchased necessary drugs worth 25 billion roubles. These are, in the first place, high-cost drugs for the treatment of severe and rare diseases; the foundation also serves to purchase drugs not registered in Russia.

The market trends in the commercial segment of drugs in 2021 were more or less predictable: the consumer demand for the most part of drugs started recovering (except in the 1st quarter, which was unstable both in 2020 and in 2021, the demand grew by 9%); with respect to drugs from the list of those recommended for the treatment of the coronavirus, the demand was highly conditioned on the incidence rates (only +2% over the year in total).

Pharmacy sales of parapharmaceuticals grew by 4%. The growth was driven by dietary supplements (in particular, vitamins and immunizers), medical devices, and cosmetics. Other groups showed negative dynamics.

The share of imported drugs dropped by the end of 2021 across the market by 55.0% in roubles and by 32.7% in packages. Negative market dynamics in volume were recorded for made-in-Russia drugs (-7%) as well as for imported ones (-3.6%). In roubles, localized drugs grew by 18%, whereas imported ones – by 11%.

In 2021, the manufacturer ranking was much affected by Covid-19. Even the top three manufacturers changed. First comes Bayer, followed by Sanofi and Novartis. The maximum growth in the top 20 was demonstrated by Russian Biocad, R-Pharm, and Pharmasyntez.

As at the end of December 2021, there were 65.6 thousand pharmacies in Russia, which is 1.7% more than a year earlier (+1,080 pharmacy outlets). 2021 saw a continuing consolidation of major players; the purchase of the Erkapharm pharmacy chain by distributor Katren became a strategic deal. In consequence, the share of the top 20 players rose to 69%. Ranking first is ASNA (13.9%), with around 16 thousand pharmacies. Among “traditional” chains, the maximum share belongs to Rigla (7.7%), which grew by 1%.

With the authorization of Internet retailing, the market became more attractive for “new” players such as: Ozon, Wildberries, Yandex, and Russian Post, the food retailers with their already known online marketplaces. This channel can hardly be expected to trigger any extra growth in the sales of drugs, but it is sure to take its share of pharmacies' turnovers. In 2021, pharmacy eCom was worth around 126.4 billion roubles (drugs and parapharmaceuticals together), which is 8.7% of the pharmacy market. If we state that the sales dynamics across the market are at around 3.5%, then turnovers in the online segment grew against 2020 by 36%.

The situation in the distributor segment continues changing. In 2021, Pulse with a 14.7% share remained on top. Katren, with 13.0%, moved up to rank second. The third in the top three distributors is Protek, with a 12.6% share. At the end of the year, the total share of 10 largest distributors on the pharmaceutical market dropped to 72%, due to the better performance of companies that focus on the public procurement segment.

According to our forecasts, in 2022 the market will amount to 2,382 billion roubles (without taking into account Covid-19 vaccines), which is 4% higher than in 2021. The low dynamics must be on account of the improving epidemiological situation in the country in the second half of the year, and, consequently, the reduction in the consumption of drugs recommended for the treatment of the coronavirus infection. Hopefully, the pharmaceutical market (and the world) are heading for recovery from the coronavirus crisis.

1. Volume of the Russian pharmaceutical market

The world has been facing the coronavirus pandemic already for three years, and the pandemic is the key factor that affects the development of any industry, as well as the economy on the whole. 2020 and 2021 showed that one of the main effects of Covid-19 is uncertainty, which makes it impossible to attempt to make any forecasts. This is true for macroeconomic indicators such as GDP, or inflation, as well as for the pandemic-related industry – the pharmaceutical industry.

It is true that the consumption of drugs is directly conditioned on the disease burden. The accumulated statistics on the main diseases were sufficient for making realistic forecasts; any growth in sales depended only on additional factors, such as augmented efforts in diagnosis and prevention, or additional financing for a specific disease code. Scientific methods were helpful even in anticipating ARVI and flu outbreaks, which expectedly increased the demand for the relevant drug groups. Covid-19 has broken the established trends and links, having affected the structure of consumption both in the retail segment and in competitive procurement. The number of infected people, hospitalization rates, lists of drugs recommended to treat the coronavirus infection (the Covid-19 treatment provisional guidance has seen already 14 updates since April 2020), new virus variants that can significantly change the first recorded indicators – these are the factors that cannot be currently forecast but that influence the volume of the pharmaceutical market.

It is also noteworthy that in 2021 the market saw a new segment – the production of vaccines to prevent the coronavirus infection. At the end of 2021, more than one vaccine was being used in Russia. Three institutes have registered their vaccines and are on the vaccination list. In January 2022, the Saint Petersburg Scientific Research Institute of Vaccines and Serums of the Federal Medical and Biological Agency, became the fourth institution to apply for the registration of a new vaccine against COVID-19 under the brand name of Konvasel.

The vaccines currently in use were put on the VED list at the end of 2020, and their maximum sale prices were registered at: Gam-COVID-Vac (Sputnik V) and CoviVAc – the maximum price for two doses, net of VAT, is approximately RUB 866; an EpiVacCorona set costs RUB 842.

In 2021, the vaccination rate in Russia neared 50%. At the end of December, over 73 million Russians were fully vaccinated. Around 75 billion roubles were expended by the state on Covid-19 vaccination compensations (an additional growth of the public drug segment by 9%). It should be mentioned that at the end of 2021 a new national schedule for preventive and pandemic vaccination was approved, and it included the vaccine against the coronavirus infection. Accordingly, now costs on the purchase of this vaccine will become annual.

Of particular note is the fact that Covid-19 not only boosts the pharmaceutical market for the treatment of the disease, but also affects the size of the population. The excess mortality due to the coronavirus infection was one of the basic factors for the depopulation in 2020 (minus 500 thousand people). As at January 1, 2022, the population size was 145.48 thousand people, which means nearly another 700 thousand less. All in all, about 518 thousand people died from Covid-19 in 2021. High excess mortality rates are observed, in the first place, among elderly people, which means a reduction of the number of pharmacy customers on the whole as well as re-distribution of the customer rates by consumer behaviour.

However, though in the focus of everyone's attention, the coronavirus is not the only topic of the year. The top 3 priorities are expected to cover state regulation (labelling, mandatory licensing), and changing trends in the pharmacy market (due to the permitted Internet retailing of over-the-counter drugs). In one way or other, all these issues are related to or triggered by Covid-19.

Drug labelling, which only a year ago seemed so terrifying and precarious to producers and pharmacies, became in 2021 quite commonplace. The process can be called smooth and well-functioning. The notification system for reporting data to the system remains convenient for pharmacies: the customer does not have to wait extra time at the cash desk, the risk of shortages of drugs in the pharmacy because of errors in the distributor-pharmacy chain in the system are lower. The Ministry of Industry and Trade even proposed that the system should remain in place with no limit in time.

On the other hand, any process needs control and any failure to comply with it requires punishment. The law regulating penalties for failure to comply with the product labelling requirements took effect as from December 1, 2021. The law stipulates that production or sale of unlabelled drugs or of drugs labelled in violation of the labelling rules, where the aforesaid contains no material elements to offence, entails a fine: for officials – from 5 thousand to 10 thousand roubles with confiscation of administrative offence items, and for legal entities – from 50 thousand to 100 thousand roubles with confiscation. Late entry of data or entry of invalid data in the system for monitoring movements of drugs intended for medical use will be punishable by a fine: for officials – from 5 thousand to 10 thousand roubles, and for legal entities – from 50 thousand to 100 thousand roubles.

After the system for the tracking of the movement of drugs is successfully established, the state wants to extend the medical product groups subject to labelling. A pilot project on the labelling of dietary supplements was launched on May 1, 2021; it is planned to be completed by August 31, 2022. A volunteer test initiative on the labelling of antiseptic and antibacterial hand sanitizers was launched on August 1, 2021. The test will last until August 31, 2022. Medical products and medical equipment (absorbents, coronary stents, hearing aids and orthopedic footwear, MRI scanners, X-ray units, and ultrasound machines) can be the next groups subject to mandatory labelling. However, no launch dates have been announced yet for these groups.

A fully functional system of the provision of drugs depends on whether it is possible to provide the consumer, to the full extent and in good time, with necessary drugs. This issue becomes especially important amid a pandemic, which has been convincingly demonstrated by Covid-19. In this context, the question of the access to the market for equivalent drugs, for drugs that are still under patent protection, was raised once again. In consequence, in the autumn of 2021 a method for the calculation of the compensation for the use of an invention without the patent holder's consent was approved; according to the method, the compensation will be 0.5% of the revenues from the production and sale of products with the use of the invention. Also, the mode of the payment of the compensation was set: the compensation will be granted by annual payments, as long as the Government's resolution on the mandatory licensing is in force. This option can only be used with the permission of the Government of Russia, when it issues a permit for the production of copies of patented products necessary for purposes of defence, national security, protection of life and health and the population, including during epidemics and pandemics.

The amount of the compensation is not commensurable with a company's potential revenue with any other format of collaboration, be it contractual transfer of the right to use a patent, local content of products made on a domestic site, etc. For example, such a permit was given in 2020 to Pharmasyntez JSC for the production of Remdesivir, the drug against Covid-19, owned by American Gilead Sciences. The permit was given for a term of one year, but the amount of the compensation for use has not yet been determined.

In April 2020, Russia also adopted special conditions for the registration of drugs used in case of emergency and threats of the spread of dangerous diseases. Registration of such drugs can be accelerated – they can be registered before the completion of all stages of clinical trials. This mechanism was used to register the coronavirus vaccines, Favipiravir, and Levilimab. Order of the Government of Russia No. 441, which introduced this mechanism, was in effect until January 1, 2022, but the Ministry of Health proposed extending the term until January 1, 2023. Additionally, the issue of setting specific criteria for putting into circulation high-tech medicines is being addressed – the negotiated criteria will apply on a continuing basis. Accelerated examination will be possible for orphan drugs; for drugs intended for underage children only; for drugs that are especially important for the health of the population. Maximum 150 days can pass from the date of the application for the registration of a drug until the issue of the drug registration certificate.

In April 2020, a law was passed to authorize pharmacies to engage in distance retailing of drugs. In the beginning, pharmacies had to meet certain requirements (at least 10 chain outlets, an own Web site, a license for a year and more), which limited access to the segment for some companies. But the amendments made to the law in September 2021 allow distance retailing and delivery of over-the-counter drugs for single-unit pharmacies and small chains, and permit marketplaces to engage in Internet sales. These legislative changes not only opened distance retailing to pharmacy chains, but also granted access to the pharmaceutical market to major online retailers, some of which received pharmacy licenses and added over-the-counter drugs to their product mix.

Many marketplaces (Ozon, Wildberries, SberMarket, and others) successfully entered the online over-the-counter market at the end of 2020. In 2021, the market saw more players:

Russian Post, AliExpress Russia, and from December – X5 Retail Group with the Vprok marketplace. As a result, the pharmacy segment of the market is in the process of transformation. Appearance of the new, the so-called "non-core" players increases the competition, and with the low retail sales growth rates, also reduces the revenues of traditional pharmacies.

The online segment will continue developing. Moreover, there is much discussion about allowing distance retailing to extend also to prescription drugs. The common and successful usage of e-prescriptions will help tilt the balance in favour of this trend. 2022 is the year of the launch of pilot programmes on the Internet sale and home delivery of prescription drugs in Moscow, Moscow suburbs, and the Belgorod Oblast. As before, certain prescription drugs will not be allowed to be sold online. Among such drugs are: narcotic and psychotropic substances and their precursors, strong drugs with small quantities of narcotic substances, alcohol-containing medications with an ethanol volume concentration above 25%, radiopharmaceuticals and immunobiologicals. If the pilot programmes prove to be successful, they can be replicated throughout the country.

The online format offers a strong advantage to consumers – they can select an outlet with the most convenient prices for them. A by-effect of the development and growth of this sale format was the containment of prices and, as a result, low inflation for drugs over the year. On the whole, in 2021 prices for drugs grew by 3.7% (half as high in 2020).

Whether the pharmaceutical market will be able to keep inflation in check also in 2022 remains unclear. But the probability of increase in drug prices and a high price index is very high. There is a variety of factors contributing to that: external economic conditions, increasing exchange rates, legislative initiatives concerning imports of drugs, growing prices for raw materials and substances. In consequence, the market can face the problem of the disappearance of certain drug categories, as many producers can be in doubt about continuing the production of cheap VEDs. Inflation rates for drugs vary according to a certain repeating pattern: after a year with low inflation rates, prices tend to grow more.

In the end, price factors will prevail in the structure of growth of the pharmaceutical market in value terms.

At the end of 2021, the market volume amounted to 2,295 billion roubles (net of Covid-19 vaccines). Dynamics in money terms was at 12.7%. Considering the funding of the coronavirus vaccination campaigns, the capacity exceeded 2,370 billion roubles (+16% to 2020). For a second consecutive year, public purchases of drugs continue to be a growth driver owing to additional funding of national projects and allocation of funds for purchases of drugs for the treatment the coronavirus infection.

In dollars and in euros, in 2021 the market demonstrated positive dynamics. Amid the growth of the pharmaceutical market in roubles and an increase in the exchange rate, some of the growth was levelled off. In dollars, the volume in 2021 was 31 billion dollars, which is 9% higher than a year before. In euros, the market dynamics were +5% lower, and the total volume exceeded 26 billion euros.

In packages, drug consumption remained negative. The market shrank in the commercial segment (-8%). In the segment of public purchases, owing to improved supplies to healthcare institutions, the gain was positive – around 3%. In 2021, consumption of drugs in volume terms dropped by 6% to come to 5.6 billion packages.

Figure 2 shows the dynamics of the volume of the Russian pharmaceutical market in 2020–2021, by segment (net of Covid-19 vaccines).

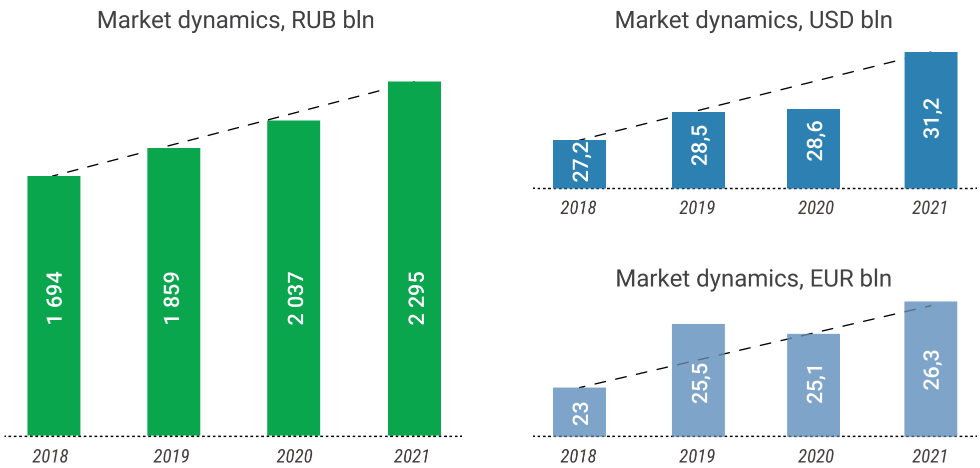
The state sector – the publicly–funded market – hospital purchases, pharmaceutical benefits (including High-Cost ICD and Essential Drug Coverage programs) and regional benefits — accounts for 42% of the drug market volume. In 2021, this figure grew by 6 percentage points.

The highest growth in 2021 was in the purchases of drugs for HCI – to 586 billion roubles (+47%). The basic growth driver was the purchases of drugs recommended for the treatment of Covid-19. Whereas in 2018–2019 INNs put on the list did not account for more than 10 billion roubles, in 2021 they came to 142 billion roubles. So, purchases of drugs against the coronavirus infection additionally brought about a 37% gain in the total volume of supplies of drugs for the needs of HCI. But for this factor, the gain would have been about 17%, and mainly on account of the extra funding for the children support foundation "Krug Dobra" ("Circle of Kindness"), and procurement of necessary drugs in 2021 for 25 billion roubles.

Preferential purchases at the expense of the regional resources grew by 13.6% against

Fugure 1

Pharmaceutical market dynamics



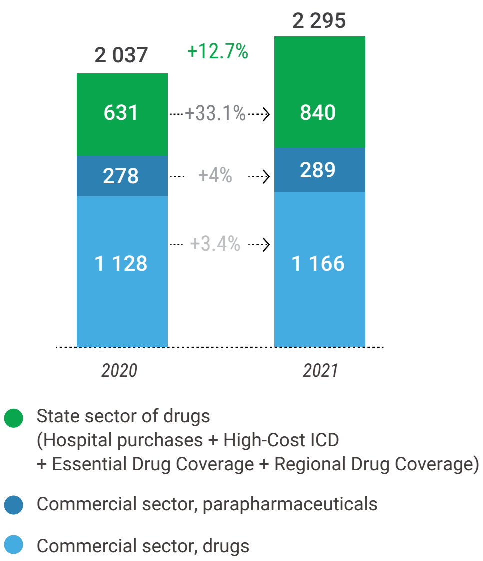
2020. Federal benefits were 3% higher than a year earlier.

In the commercial segment of drugs, there were several basic trends in 2021. In 2020, the structure of sales of drugs depended on the factors such as restrictive measures, problems with supplies, and shortages amid an increased demand and growing incidence rates - all that shifted the demand towards the drugs to treat Covid-19. In 2021, consumer preferences tended to go back to those of 2019, and the consumption of many drug groups was no longer conditioned on the number of people infected with Covid-19. Another wave of the virus only increased pharmacy sales.

At the end of 2021, the commercial market for drugs accounted for around 4.56 billion packages, or 1,166 billion roubles. Compared with 2020, the volume of sales of drugs in packages shrank by 7.7%. In value terms, sales grew only by 3.4% against last year. Such low dynamics are, in the first place, due to high volumes of sales in March 2020 – amid the increase in the exchange rates and the imposition of restrictive measures due to the pandemic of Covid-19, the demand for drugs hit its peak over the last 10 years (+46.1% in roubles, and +35.2% in packages). In 2021, the market went positive only by the autumn.

Pharmacy sales of parapharmaceuticals grew by 4%, to come to 289 billion roubles. The growth was driven by dietary supplements (in particular, vitamins and immunizers), medical devices, and cosmetics. Other groups showed negative dynamics.

Pharmaceutical market capacity
RUB bln in consumer prices



Pharmaceutical market capacity
mln packages

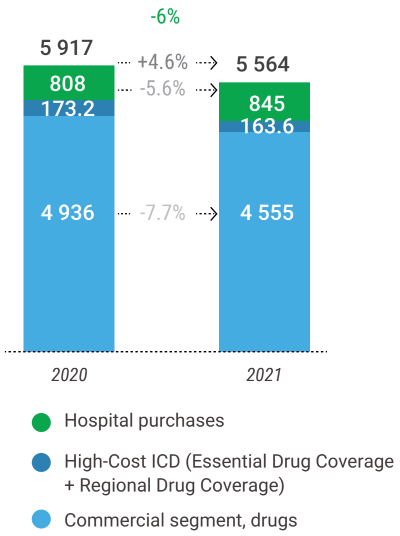


Figure 2

Pharmaceutical market capacity

Market in figures

At the end of 2021, imported drugs in the overall market accounted for 55.0% in roubles, and for 32.7% in packages. In volume terms, the market growth was negative both for made-in-Russia drugs (-7%) and foreign-made ones (-3.6%). In rouble terms, localized drugs grew by 18%, and imported ones – by 11%.

By the type of dispensing, the market structure varied towards prescription drugs. Rx drugs account for around 71% in monetary terms. Owing to lower prices, however, OTC drugs prevail in packages and account for 51.3%. Let us note than in 2021, the share of prescription drugs grew by 4% in value terms: this is on account of the intense growth of purchases in the public segment. Most of OTC drugs are sold in pharmacies (about 95% in roubles of the OTC volume). Rx drugs are sold mainly in the public segment: over 97% of the consumption volumes in bid purchasing.

Vital and Essential Drugs (VED) are a list of drugs, approved by the Government of the Russian Federation for the state regulation of drug prices. In 2021, the list was extended, and VEDs grew from 56% to 63% in value terms. In packages, VEDs account for 61.5% (+8.3% to 2020).

In 2021, the share of original drugs was 44.4% in value terms, and 17.1% in volume terms. Compared with 2020, their share in packages keeps growing (+1.2%). The growth was thanks to the increased funding in the public segment for purchases of expensive drugs.

The ATC rating in 2021 is headed by [L] Antineoplastic and Immunomodulating Agents, which include expensive drugs. Owing to the increased funding in the public segment, the consumption of drugs of this group grew: +26%. The main channel, through which dispensing of antineoplastic drugs is funded, are pharmaceutical benefit programs (federal and regional benefits) – 32%, and hospital

Figure 3

Market structure, various sections, 2021

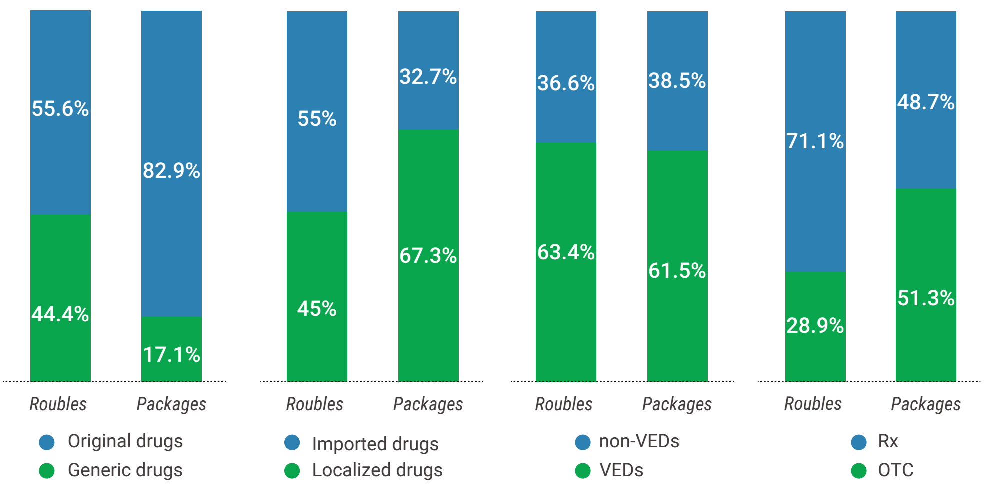


Table 1

Structure of sales of drugs by ATC codes, 2021

ATC codes 1st level	Share in value terms, %	Share in volume terms, %
L: Antineoplastic and Immunomodulating Agent	**17.57%**	**1.93%**
A: Alimentary tract and metabolism	**14.10%**	**15.28%**
J: Antiinfectives for systemic use	**14.03%**	**11.40%**
C: Cardiovascular system	**9.66%**	**7.09%**
N: Nervous system	**9.02%**	**12.76%**
R: Respiratory system	**7.93%**	**13.85%**
B: Blood and blood forming organs	**7.77%**	**13.89%**
M: Musculoskeletal system	**6.57%**	**6.99%**
G: Genitourinary system and sex hormones	**4.04%**	**1.77%**
D: Dermatologicals	**3.52%**	**8.32%**
S: Sensory organs	**1.87%**	**2.29%**
Non-ATC	**1.43%**	**0.79%**
V: Various	**1.41%**	**2.17%**
H: Systemic hormonal preparations, excluding sex hormones	**0.93%**	**1.12%**
P: Antiparasitic products, insecticides and repellents	**0.13%**	**0.35%**

purchases – 58%. At their own expense, consumers buy only cheaper immunomodulators.

[A] Alimentary Tract and Metabolism remained second, accounting for 15.0%, though with the weakest dynamics in the sales volumes – around 7%. The main channel, through which drugs of this category are sold, is the pharmacy segment: 76% in roubles are from purchases of drugs at the expense of the population.

[J] Antiinfectives for Systemic Use grew by 15% to come 3rd. 59% in this category are purchased for hospital needs, sales in the pharmacy segment came to 37% also by demonstrating high dynamics triggered by Covid-19.

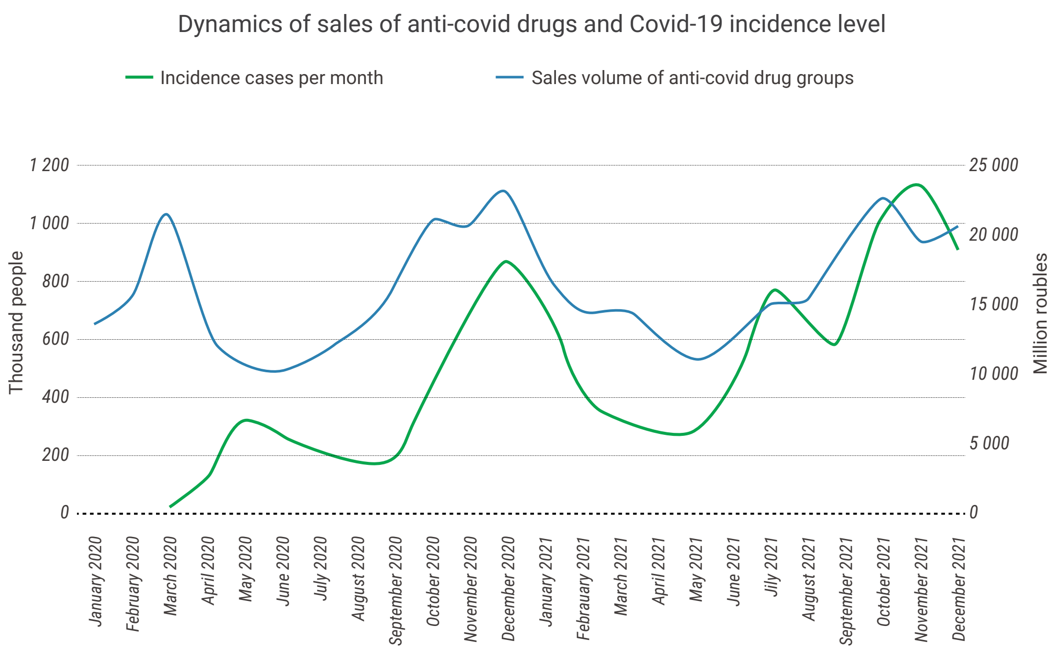
[B] Blood and blood forming organs grew most of all, by 42%, to go up from the 7th line to the 4th in the rating. This growth is on account of a high share of drugs recommended for the treatment of Covid-19 (around 47%).

2. Commercial drugs segment

2021 is over, still, it can be safely said that just like in 2020 Covid-19 remains the main factor affecting our life. We are starting 2022 amid the spread of the new Omicron variant and growing incidence rates. It means that pharmacy sales will keep growing, in particular, on account of drugs recommended for the treatment of the coronavirus infection.

If we divide drugs into 2 main groups – those recommended for the treatment of Covid-19 and all others – we can easily see the basic current trends existing on the market. Sales of Covid-19 drug categories depend much on the incidence waves: this is illustrated by the explosive growth in consumption at the end of 2020, and by the positive trends from July 2021, which ended only in November-December when the incidence rates were going negative from week to week. Let us note that at the end of 2021 only in October the rate of consumption of Covid-19 drugs was higher than in 2020 though in October-December 2021 the number of infected people was 53% more than in the similar period in 2020. So, sales of the recommended drugs no longer start growing when the incidence is increasing. This is, among other things, because in 2021 part of the drugs for the treatment of the coronavirus infection are provided free of charge, even in case of domiciliary care.

However, Russians continue buying most of the drugs in pharmacies at their own expense. In this regard, availability of necessary drugs in pharmacies is a key element of the uninterrupted provision of medicines. Pharmacies are even monitored for having such necessary drugs. For example, in Moscow, from January 2022 pharmacies have to daily report the



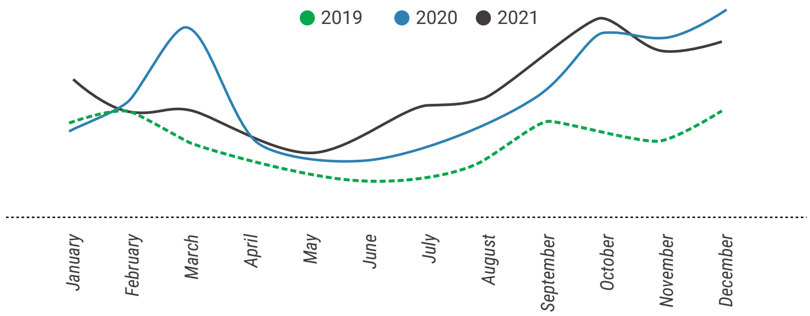
Fugure 4

Seasonal trends in 2020-2021

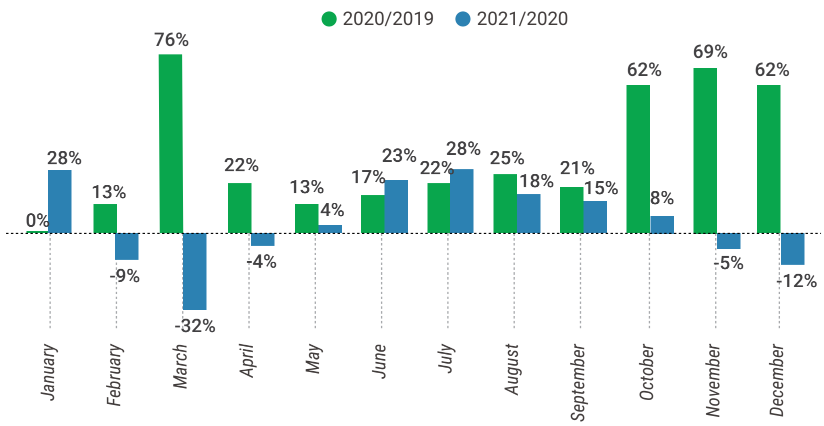
Fugure 5

Seasonal trends, 2021

Dynamics of sales of anti-covid drug groups

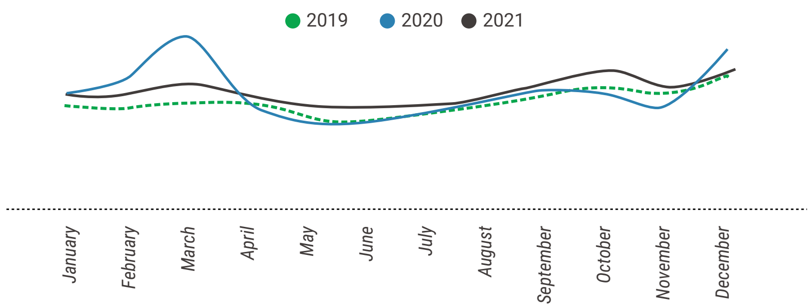


Growth in sales of anti-covid drug groups

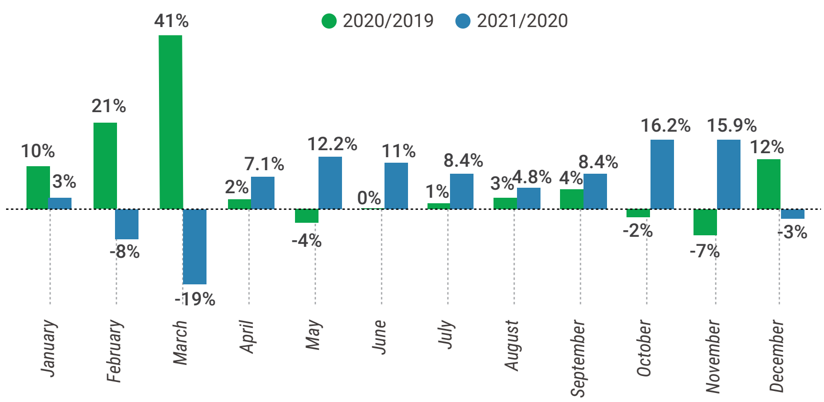


Note: Covid-19 drugs: ANALGESICS (N02); ANTIBACTERIALS FOR SYSTEMIC USE (J01); ANTITHROMBOTIC AGENTS (B01); ANTIPROTOZOALS (P01); ANTIVIRALS FOR SYSTEMIC USE (J05).

Dynamics of sales of other drug groups



Growth in sales of other drug groups



available stocks of 20 INNs classified as drugs "for the prevention and treatment of COVID-19, ARVI, and community-acquired pneumonia",

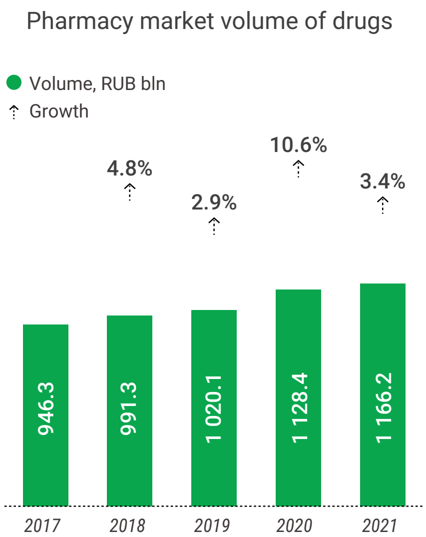
namely: azithromycin; amoxycillin; amoxycillin + clavulanic acid (Amoxiclav); apixaban (Eliquis); zanamivir (Relenza); imidazolyl ethanamide pentandioic acid (Ingavirin); interferon alfa-2b (Grippferon); Kagocel; clarithromycin; levofloxacin; moxifloxacin; oseltamivir (Tamiflu); paracetamol; riamilovir (Triazavirin); rivaroxaban (Xarelto); rimantadine; umifenovir (Arbidol); favipiravir; ceftriaxone; ciprofloxacin. According to the data for 2021, in value these drugs in pharmacies accounted for 9.2% (+0.9% to 2020), and their sales in roubles were worth around 107 billion roubles, which is 14.3% higher than in 2020.

In 2020, the structure of drug sales was surely affected by a variety of factors such as restrictive measures, problems with supplies, and shortages amid an increased demand and growing incidence rates – all that shifted the demand towards Covid-19 drugs. In 2021, consumer preferences tended to go back to those of 2019, and the consumption of many drug groups was no longer conditioned on the number of people infected with Covid-19. But, what is important – and let us note it once again – the demand for all other drugs with the increasing incidence never declined, unlike in 2020; instead, it remained unvarying and, in certain periods, was even ahead of the overall market growth. Covid-19 drugs grew in money by 2% against 2020 sales, but the volumes of all other drug groups increased by 3.6%. In packages, however, their growth rates were much more different: Covid-19 drugs dropped by 14%, other drugs shrank by 6.3% only.

Though drugs are classified as staple products, the pharmacy market dynamics are sensitive also to the external financial and economic factors. In 2021, the growth of real household disposable income hit its maximum in the last decade – over 4% (according to preliminary estimates). Yet, it remains 3% lower than in 2012.

High inflation country-wide (8.4%) and yet higher inflation for food products (10.6%) also affect the spending patterns.

It has already been mentioned that Covid-19 has reduced the population. Besides, birth rates in Russian remain low. All this reduces the number of potential pharmacy customers



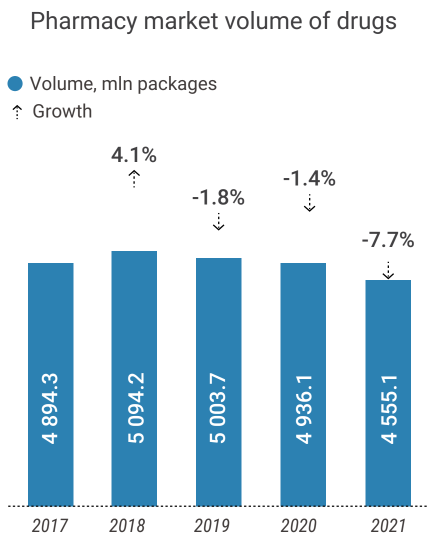


Figure 6

Dynamics of retail sales of drugs, 2017-2021 and leads to the negative market dynamics in packages. Retail sales of drugs grew in 2021 in volume terms but very insignificantly – the growth rates were the lowest compared with similar periods during the previous years; in roubles, too, the segment grew very little, despite positive dynamics.

At the end of 2021, the commercial market for drugs accounted for around 4.56 billion packages, or 1,166 billion roubles. Compared with 2020, the volume of sales of drugs in packages shrank by 7.7%. In value terms, sales grew only by 3.4% against last year.

Such dynamics are, in the first place, due to high volumes of sales in March 2020 – amid the increase in the exchange rates and the imposition of restrictive measures due to the pandemic of Covid-19, the demand for drugs hit its peak over the last 10 years (+46.1% in roubles, and +35.2% in packages). But for March, the market dynamics would have been twice as high: +6% in roubles, and just -5% in packages.

Imported/localized drugs sales ratio

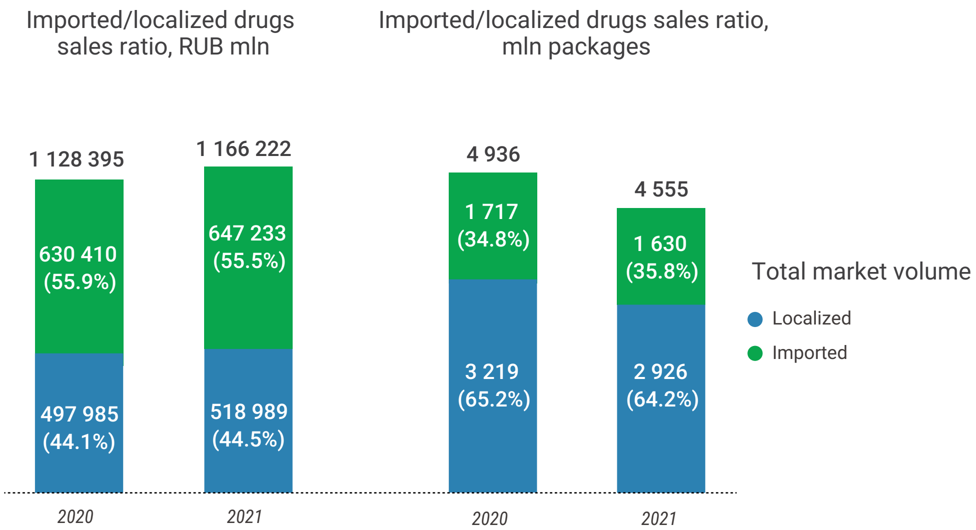
The structure of the commercial drug market by volumes of sales of localized and imported drugs is shown in Figure 7.

At the end of 2021, the share of made-in-Russia drugs grew by 0.4% to 44.5% in roubles, and reduced by 1.0% to 64.2% in packages. Localized drugs (+4.2% in roubles against 2020) are characterized by higher sales dynamics than imported drugs (+2.7%). This accords with the general concept of import substitution and makes our healthcare system more independent. In volume terms, sales of localized drugs shrank more, by 9.1% (against -5.1% for imported drugs). This is mainly due to the slump in sales of drugs in the low price segment, which includes the so-called age-old made-in-Russia drugs, such as Paracetamol (-44.7%), Chlorohexidine (-38.8%), Acetylsalicylic Acid (-26.0%), and others.

Figure7

Imported/localized drugs sales ratio, Russian retail market, 2020-2021

***Note**: Localized drugs are drugs made in the territory of Russia.*



The shift in the sales structure towards localized drugs was, in the first place, owing to antivirals Arbidol (+49.5% in value and +34.1% in volume) and Grippferon (+48.1% in roubles and +43.1% in packages).

The growing share of localized drugs is an already established trend on the drug market. Since 2018, this figure has grown from 41% to 45%.

The average weighted price of a localized drug (+14.7%) grew more than that of an imported one (+8.2%). Yet, it remains more than twice as low. In 2021, one package of a localized drug cost on average around 177 roubles, whereas an imported drug cost 397 roubles.

Though, in general, Russian and foreign manufacturers present on the market are more or less the same in number (around 550 and 570 companies, respectively), pharmacies have more foreign brands (around 3,290 brands, or 8,757 SKUs). Domestic drugs are 27% less – 2,581 brands (9,083 SKUs). This shows that foreign manufacturers sell more "unique" positions – original drugs and branded generics.

Large amounts of Russian drugs are unbranded generics produced by several companies at a time.

Rx/OTC drug sales ratio

The ratio of pharmacy sales of Rx and over-the-counter drugs is shown in Figure 8.

Compared with 12 months of the previous year, the market structure by the dispensing format shifted in favour of prescription drugs (+1.4% in roubles, and +1.6% in packages). In terms of specific features, the rouble shares of Rx and OTC drugs on the pharmacy market are nearly the same. In volume terms, as before over-the-counter drugs are ahead, accounting at the end of 2021 for 60.2%.

The dynamics for several years show a trend of the market structure shifting towards Rx drugs: for comparison, in 2017 they accounted for around 49.2% in money and for 34.7% in packages. One of the factors accounting for the trend is the tightening of the rules of dispensing of certain drugs.

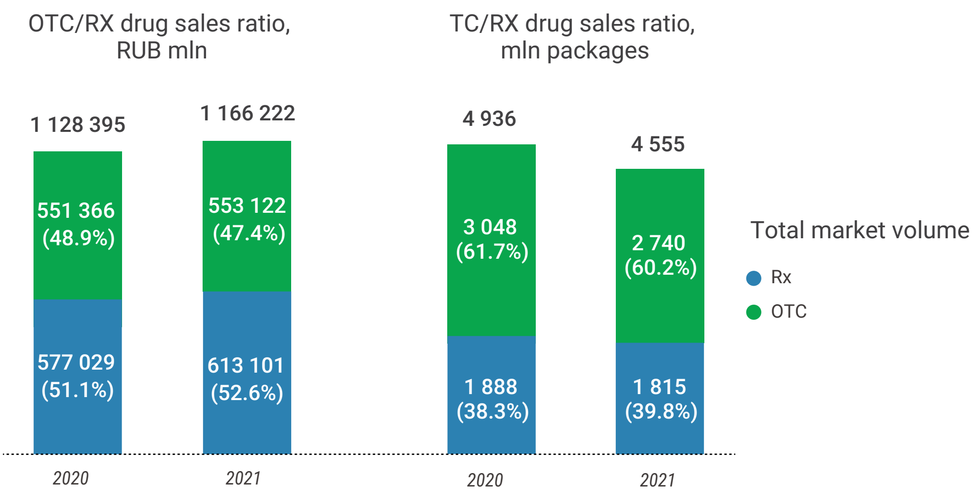


Figure 8

OTC/Rx drug sales ratio, Russian retail market, 2020-2021

Note:
Shares of Rx and OTC drugs have been calculated on the basis of the official classification according to the List of Over-the-Counter Drugs, without taking into account that Rx drugs are often dispensed in pharmacies on an unrestricted basis.

The average price of an Rx drug was 338 roubles, an OTC drug cost 202 roubles on average in pharmacy retail prices. Prices for both categories rose compared with the similar period of the last year, by 10.5% and 11.6%, respectively.

Original/generic drug sales rati

The market situation in 2021 promoted the basic trends of the past years. The highest retail sales were observed in generics: just like a year earlier, in roubles they accounted for 60.4%, in packages their share dropped by 0.6% to 81.1%. Whereas in packages generics are steadily above 80%, in roubles they demonstrate a distinct upward trend: from 58.0% in 2017 to 60.4% in 2021.

In absolute terms, sales volumes in roubles noticeably grew equally both for generics and for original drugs: +3.4% and +3.3.%. In volume terms, sales of generics dropped by 8.4% and of original drugs – by 4.7%, and this explains the shift in the market structure towards the latter in packages.

The average price of an original drug was 537 roubles/package (+8.4% against 2020); a generic drug was sold on average at 191 roubles (+12.9%).

Structure of sales of drugs on the retail market by ATC codes

The ratio of Russia's pharmacy sales of drugs by ATC codes, 1st level, is shown in Table 2.

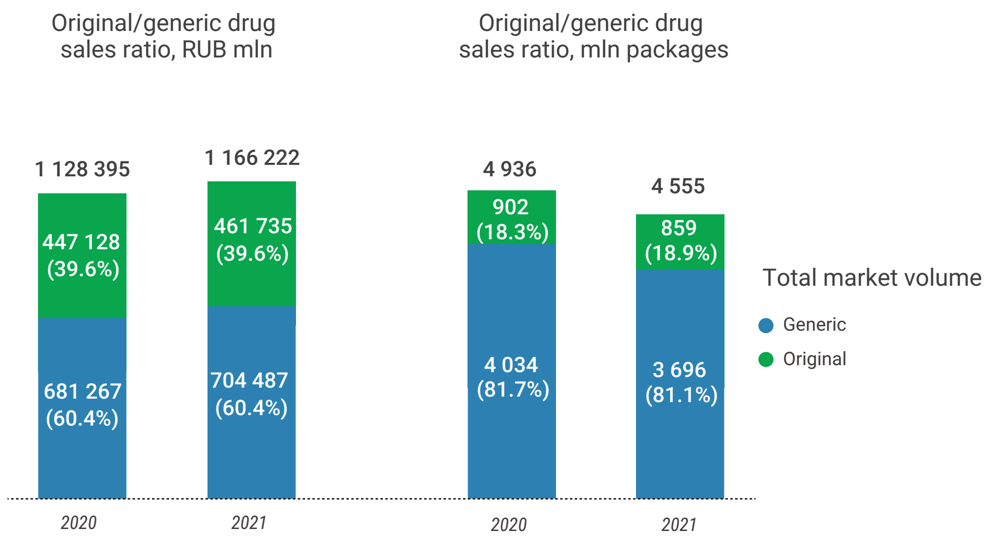
In 2021, there were some changes in the structure of the pharmacy market by ATC codes, 1st level, against 2020:

- drugs acting on blood and blood forming organs (+16.6%) and drugs for the treatment of skin diseases (-5.7%) swapped their positions due to a variety of trends;
- owing to a noticeable increase in sales, other drugs (+17.3%) unseated [H] from the 13th position line.

[A] Alimentary tract and metabolism is traditionally on top (+6.4%) with a 18.5% share in value terms. The best sellers in this ATC code were

Fugure 9

Original/generic drug sales ratio, Russian retail market, 2020-2021



ATC codes 1st level Value,	Value, bln roubles	Growth, roubles	Volume, mln packages	Growth in packages
Alimentary tract and metabolism [A]	**215.8**	**6.4%**	**741.9**	**-7.1%**
Cardiovascular system [C]	**167.4**	**1.9%**	**637.3**	**-3.6%**
Respiratory system [R]	**140.0**	**7.2%**	**723.4**	**-1.9%**
Nervous system [N]	**128.0**	**2.5%**	**679.4**	**-13.3%**
Antiinfectives for systemic use [J]	**105.0**	**-2.1%**	**360.9**	**-10.9%**
Musculoskeletal system [M]	**96.0**	**6.0%**	**368.6**	**-4.1%**
Genitourinary system and sex hormones [G]	**78.1**	**2.4%**	**94.6**	**-2.2%**
Blood and blood forming organs [B]	**67.0**	**16.6%**	**152.7**	**0.4%**
Dermatologicals [D]	**66.8**	**-5.7%**	**410.1**	**-17.1%**
Antineoplastic and immunomodulating agents [L]	**34.3**	**-6.3%**	**65.6**	**-9.1%**
Sensory organs [S]	**31.2**	**-1.6%**	**121.2**	**-8.2%**
Non-ATC	**19.3**	**3.5%**	**119.7**	**-12.2%**
Various [V]	**7.6**	**17.3%**	**26.9**	**1.5%**
Systemic hormonal preparations, excluding sex hormones [H]	**7,4**	**-0.1%**	**34.4**	**-3.3%**
Antiparasitic products, insecticides and repellents [P]	**2,3**	**-7.2%**	**18.5**	**-11.2%**

Table2

Drug sales structure, Russian retail market, by ATC, 2021

Note:
Non-ATC drugs, drugs not assigned ATC codes (homeopathic medicines, vegetable drugs, animal-extracted products, substances, etc.).

hepatoprotectors Heptral (3.3% of the group's sales) and Essentiale (2.1%), and eubiotic Linex (2.7%). A substantial increase in sales was observed in hepatoprotectors Heptral (+50.0%) and Ursosan (+24.3%), and Milgamma Vitamin B complex (+20.3%). At the same time, among the ten top brands in [A] only sales of hepatoprotector Essentiale dropped (-0.9%).

About 15% of the value volumes of sales in ATC [A] fall within [A07] Antidiarrheals. The leader by sales volumes in [A07] was Linex, with a 17.6% share in roubles. Enterosgel and Enterofuryl are 2nd and 3rd in the value ranking, with 10.2% and 7.3%, respectively. The leader by the number of sold packages is low-cost and generally home-made Activated Carbon (29.4% of sales in [A07]).

The highest dynamics in its ATC segment were recorded in 2021 in [A16] Other alimentary tract and metabolism products – sales volumes increased by 33% in roubles. One of the factors accounting for this is a higher demand for Thioctic Acid (+549.7% to 2020) and Thiolepta (+46.6%) used in the treatment of alcoholic and diabetic polyneuropathies, and hepatoprotectors Samelix (+324.0%) and Heptral (+50.5%).

Second-best by value volumes is ATC [C] Cardiovascular System (14.4%). The leading brands in [C] are Detralex (4.6%), Concor (3.5%) and Lorista (3.2%). The drugs that contributed most to the 1.9% increase in sales in this category were venotonic and venoprotective agent Venarus (+17.1%), beta-adrenergic blocking agent Bisoprolol (+16.5%), and antilipedimic Atorvastatin (+8.8%). The biggest drop in the top ten brands of the group was recorded for antihypertensive drugs Lozap (-24.3%) and Valsacor (-10.7%).

The third in the top three is ATC [R] Respiratory system, with a 12.0% share in roubles. Sales of [R] drugs grew by 7.2%. Most noticeable were the dynamics in [R05] Cough and Cold Preparations (+12.1%) with the leading brands such as ACC (a 16.3% share in the sub-group in roubles), Rengalin (6.9%) and AnviMax (6.2%).

Increase in the volume and average per package prices in ATC codes is shown in Figure 10.

Groups not related to the treatment of COVID-19 grew faster. The dynamics of these groups (for example, J and R) slowed down, in particular, due to high base performance in 2020.

The ATC codes with the highest growth in 2021 were: [V] Various (+17.3%), [B] Blood and blood forming organs (+16.6%), and [R] Respiratory system (+7.2%).

Among various drugs, the highest growth was recorded for solvents Sodium Chloride (+54.7%) and Water for Injections (+34.3%), and Meedzo used in the treatment of alcohol addiction (+46.4%).

Drugs acting on blood and blood forming organs rank second by the growth rates. A significant increase in sales was demonstrated by [B01] Antithrombotic Agents, which account for 72.9% of sales in [B]. Within [B01], the best sellers were Eliquis (+79.6%), Xarelto (+24.2%), and Vessel (+20.0%).

Respiratory drugs grew owing to topically applied glucocorticosteroid Pulmicort (+36.2%), plant-based Sinupret for the treatment of rhinosinusitis (+27.9%), and decongestant Otrivin (+27.9%).

Antiparasitic products, insecticides and repellents, on the contrary, showed a maximum drop in sales - by 7.2% against 12 months of 2020.

In volume terms, the highest growth in consumption was observed in [V] Various (+1.5%) and [B] Blood and Blood Forming Organs (+0.4%). The biggest drop in pharmacy sales in packages was recorded for dermatologicals (-17.1%), drugs to treat diseases of the nervous system (-13.3%), and non-ATC (-12.2%).

The highest weighted average per package price at the end of 2021 was 825 roubles for drugs in [G] Genitourinary System and Sex Hormones. The price is so high because the price per package for certain drugs in this group is 10,000 roubles and more. A high weighted average price is observed also in [L] Antineoplastic and Immunomodulating Agents – around 522 roubles, and in [B] Blood and Blood Forming Organs – 439 roubles. The weighted average price for antiparasitic drugs, insecticides and repellents is, on the contrary, the lowest – 124 roubles per package.

How much various ATC codes contributed to the overall commercial market growth has been measured on the basis of the weighted average increase: the value showing the share of the ATC code multiplied by its growth rate (Figure 11).

Among the groups that most of all contributed to the growth of the commercial drugs market in 2021 were: [A] Alimentary tract and metabolism, [B] Blood and Blood Forming Organs, and [R] Respiratory System, which totalled 3.0% or around 83.1% of the market growth on the whole.

Drug manufacturers on the retail market

Table 3 shows the top 20 manufacturers leading by the sales value on the Russian commercial market in 2021.

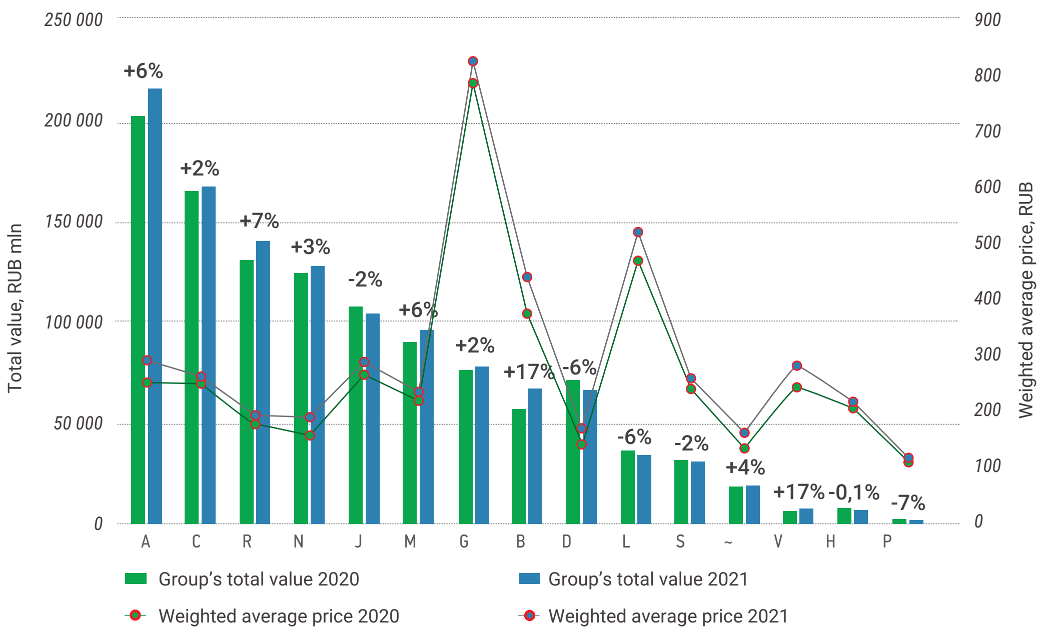


Figure 10

Structure of the retail drug market, 2020-2021

In 2021, there were 1,084 players on the Russian pharmaceutical market. Cumulatively, the top 20 companies cover 53.7% of the value of drug sales. Compared with 2020, the total share of the top 20 fell by 0.6%. The ranking of manufacturers is more stable than the ranking of drugs.

Classically, the year-end market leader in the pharmacy segment is Bayer (4.5% in roubles), its volumes of sales in the pharmacy segment increased by 1.6%. The German corporation's portfolio comprises 64 brands sold in pharmacies The company's maximum sales are from direct-acting anticoagulant Xarelto – at the end of 2021 it accounted for 28% of the company's sales in the rouble equivalent (+5% against 2020), having grown by 24.2% in the sale volume for the year. This is the maximum growth in Bayer's top 10. In volume terms, the leaders by sales volumes are the best sellers such as Relief, Rennie and Bepanthen. These three brands account for 30% of sold packages, which is nearly twice as much as the total share of these drugs in the company's sales by value.

Russian OTCPharm ranks second, being only 0.1% in roubles behind the leader. In 2021, the company's sales grew by 5.6% compared with the previous year. Russian pharmacies sell 40 of the company's brands; the most significant increase in demand was recorded for antiviral Arbidol (+49.5%). Among the key brands, there was also a «falling» group of drugs: antiviral immunostimulant Amixin (-38.3%), vitamin and mineral complexes Complivit (-16.2%), and MIBP eubiotic Acipol (-7.2%).

The third best is Novartis Corporation with a 3.8% share. By the end of 2021, the company's sales had dropped by 5.9%. A significant decline in sales was recorded for several leading brands: Broncho-Munal (-28.7% against 2020), Ketonal (-12.7%), and Exoderil (-12.4%). The most significant increase in sales from the top ten of Novartis brands was demonstrated by Ferrum (+13.3% against 2020).

Figure 11

Weighted increase in retail market drugs, by ATC codes, 2021

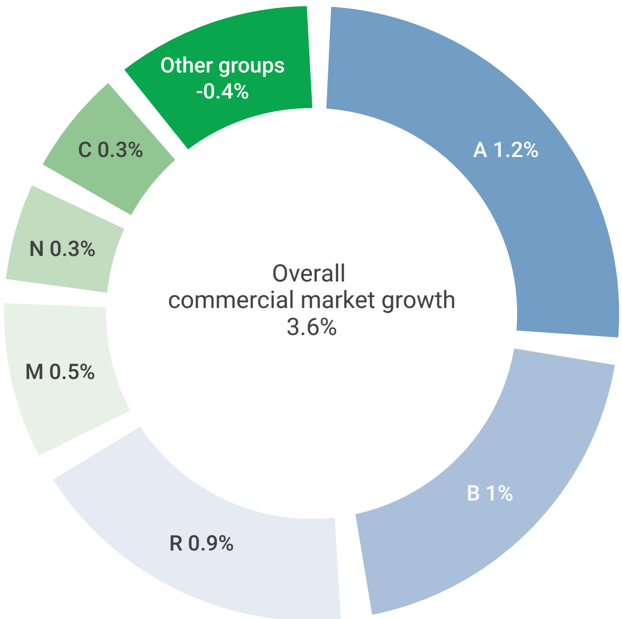


Table 3

Top 20 drug manufacturers by value, 2021

__Note:__ «manufacturer» means the parent company that may incorporate several manufacturing sites.

Ranking	Change against 2020	Manufacturer	Sales volume, mln roubles	Share	Growth to 2020
1	-	Bayer	**52 440.9**	**4.5%**	**1.6%**
2	-	OTCPharm	**51 127.9**	**4.4%**	**5.6%**
3	-	Novartis	**43 746.2**	**3.8%**	**-5.9%**
4	+1	Stada	**40 297.7**	**3.5%**	**-1.4%**
5	-1	Sanofi	**38 406.7**	**3.3%**	**-7.1%**
6	-	Teva	**36 827.3**	**3.2%**	**-3.3%**
7	-	Servier	**33 784.2**	**2.9%**	**-1.2%**
8	+1	Abbott	**33 657.1**	**2.9%**	**6.4%**
9	+2	A. Menarini	**33 373.8**	**2.9%**	**8.8%**
10	-2	GlaxoSmithKline	**33 039.8**	**2.8%**	**4.1%**
11	-1	KRKA	**31 526.8**	**2.7%**	**2.1%**
12	-	Gedeon Richter	**24 648.8**	**2.1%**	**-1.9%**
13	-	Binnopharm Group	**24 293.1**	**2.1%**	**-0.7%**
14	-	Pharmstandard	**23 495.8**	**2.0%**	**4.4%**
15	+4	Pfizer	**23 120.1**	**2.0%**	**30.2%**
16	+4	Ozon	**22 842.2**	**2.0%**	**28.6%**
17	-2	Johnson & Johnson	**21 960.5**	**1.9%**	**-1.7%**
18	-2	Polpharma	**21 594.0**	**1.9%**	**1.7%**
19	-1	Dr.Reddy's	**20 293.1**	**1.7%**	**-0.2%**
20	-3	Valenta Pharm	**19 194.9**	**1.6%**	**-6.0%**

The maximum drop in sales among the top 20 drug manufacturers was suffered by Sanofi (-7.1%). The negative dynamics experienced by the pharmaceutical corporation were on account of antihypertensive drug Lozap (-24.3%), direct-acting coagulant Clexane (-15.6%), and analgesic and antispasmodic No-Spa (-7.7%).

Maximum growth rates were demonstrated by: Russian Ozon (+29% to 2020), American Pfizer (+30%), and Russian Binnopharm Group (+10%). Thanks to the increased demand for antiviral Umifenovir (+3,199.6%), painkiller Paracetamol (+80.6%), and antilipedimic Atorvastatin (+57.1%), Ozon moved up 5 position lines in the ranking of the leading manufacturers. Owing to its antiepileptic drug Lyrica (+85.9%), direct-acting anticoagulant Eliquis (+79.6%), and antilipedimic Liprimar (+13.3%), Pfizer gained 5 position lines. Sales of Russian Binnopharm Group noticeably grew (+10.2%) thanks to the increased demand for venotonic and venoprotective agent Angiorus (+47.3%), cephalosporin antibiotic Ceftriaxone (+39.8%), and NSAID Dexonal (+36.4%).

Most of the ranked manufacturers are foreign ones: in 2021, there were 5 Russian companies in the top 20: OTCPharm ranking 2nd (4.38% in roubles), Pharmstandard ranking 13th (2.00%), Ozon ranking 15th (1.96%), Binnopharm Group ranking 18th (1.83%), and Valenta Pharm ranking 20th (1.65%).

In packages, as before, among the leaders are Russian and foreign companies with a large proportion of generics in their product mix. The maximum share is held by Pharmstandard (7.6%). OTCPharm makes for around 4.1% of pharmacy sales in packages. The third in the top three is Ozon, with a 4.1% share. The top 20 ranked manufacturers hold more than fifty percent of the pharmacy market (53.9%) in packages, which is comparable to the concentration in value terms (53.7% held by the top 20 corporations).

Of particular mention is Grotex (+10.5%), which moved up 4 position lines at a time. Among the most successful brands of the manufacturer were: decongestant Xylokt-Solopharm (+210.4%), NSAID Angidak (+63.1%), and oral drops DeTriFerol (+61.5%) for the prevention of Vitamin D deficiency and diseases caused by the deficiency of Vitamin D (rickets, osteomalacia), in the treatment of rickets and in combined treatment of osteoporosis of various origins.

Drugs on the retail market

Table 5 shows the top 20 brands leading by the sales volumes on the Russian commercial market in 2021.

At the end of 2021, over 5,400 drug brands could be found in pharmacies. The top 20 drug brands accounted for 13.2% of the market in roubles. There are some changes in the ranking of the brands leading by value on the retail market. The lead was taken by antiviral Arbidol (1.5% in roubles) by Russian OTCPharm, having increased its sales by 49.5% against 2020. The second-ranking is the last year's leader, direct-acting anticoagulant Xarelto (1.3%) by German Bayer. Over the year, the brand's sales grew by 24.2%. The maximum growth rates were demonstrated by another anticoagulant, Pfizer's Eliquis (1.1%), that moved up from the 8th position to rank 3rd, having increased its sales by 79.6%.

Distinctly positive dynamics were demonstrated by: Abbott's hepatoprotector Heptral (+16 position lines, +50.5% against 2020); Firn M's antiviral immunostimulant Grippferon (+20 po-

Table 4

Top 20 drug manufacturers by volume, 2021

Ranking	Change against 2020	Manufacturer	Sales volume, mln packages	Share	Growth to 2020
1	-	Pharmstandard	**347.6**	**7.6%**	**-5.3%**
2	+1	OTCPharm	**187.9**	**4.1%**	**-4.5%**
3	+1	Ozon	**185.1**	**4.1%**	**3.5%**
4	-2	Stada	**180.9**	**4.0%**	**-10.1%**
5	+3	Teva	**141.1**	**3.1%**	**-3.1%**
6	-1	Renewal	**131.5**	**2.9%**	**-13.9%**
7	-	Binnopharm Group	**129.1**	**2.8%**	**-11.3%**
8	+1	Polpharma	**116.3**	**2.6%**	**-6.7%**
9	+2	Dr.Reddy's	**108.4**	**2.4%**	**-5.7%**
10	-	Novartis	**107.0**	**2.3%**	**-8.1%**
11	-5	Tula Pharmaceutical Factory	**98.5**	**2.2%**	**-34.2%**
12	+1	A. Menarini	**94.0**	**2.1%**	**1.1%**
13	-1	Sanofi	**92.8**	**2.0%**	**-7.9%**
14	-	Vertex	**86.1**	**1.9%**	**-3.5%**
15	+4	Grotex	**82.6**	**1.8%**	**10.5%**
16	-	GlaxoSmithKline	**81.7**	**1.8%**	**-1.3%**
17	+1	KRKA	**74.8**	**1.6%**	**-2.1%**
18	+4	Servier	**72.3**	**1.6%**	**-0.1%**
19	-2	Johnson & Johnson	**71.9**	**1.6%**	**-9.4%**
20	-	Abbott	**71.6**	**1.6%**	**-3.3%**

Note: *«manufacturer» means the parent company that may incorporate several manufacturing sites.*

sition lines, +48.1%); and A. Menarini's NSAID Nimesil (+10 position lines, +25.3%).

Only 4 trade names suffered a decline. Most drastically the demand fell for the following made-in-Russia drugs: antiviral Ingavirin (-21.9%) and antiseptic Miramistin (-20.8%).

MIBP Broncho-Munal (25th in 2021), antihypertensive drug Lozap (37th), and antiviral Kagocel (69th) no longer rank among the key drugs.

Most of the drugs found in the 2021 ranking are seasonal broad-spectrum medications used to treat bacterial and viral infections. Anticoagulants used to inhibit hemostasis are also in demand as blood clots are a typical complication during the novel coronavirus infection.

By packages, the leaders are the same: "age-old" cheap drugs such as Citramon (1.4% in packages), Paracetamol (1.4%) and Ceftriaxone (1.3%). Most of the drugs (14 brands) out of the top 20 by volume demonstrated negative dynamics. The biggest drop was observed for antiseptic Chlorohexidine (-37.8% against 2020), NSAID Acetylsalicylic Acid (-25.9%), and painkiller Paracetamol (-23.8%).

The maximum growth rates were demonstrated by: antiviral Arbidol (+34.1%), rehydrating and solvent agent Sodium Chloride (+11.2%), and beta-adrenergic blocking agent Bisoprolol (+6.5%). The top 20 brands by volume account for 19% of retail sales, that is their concentration is somewhat higher than by value. The weighted average price for the top 20 in packages is about 80.6 roubles.

Vital and Essential Drugs (VED)

Vital and Essential Drugs (VED) are a list of drugs, approved by the Government of the Russian Federation for the state regulation of drug prices.

As from 1 January 2021, the VED list comprised 788 items. For reference, last year there were 758 items on the list. The list has been added also with the vaccines to prevent the coronavirus infection (COVID-19).

At the end of 2021, more than 900 INNs from the VED list (2,414 brands) were recorded to be sold through pharmacies. VED sales were worth 512.9 billion roubles, or 2,486 million packages (Figure 12).

Let us note than in value terms sales of VEDs grew a little more than of other drugs (+3.6% – VEDs, +3.2% – non-VEDs). In volume terms, sales of VEDs dropped by 7.0% whereas sales of non-VEDs declined by 8.5%.

Domestic vital and essential drugs in volume terms accounted for 58.4% and for 38.0% in money terms.

At the end of 2021, the weighted average price for VEDs was 206 roubles; the price per package for domestic drugs was about 134 roubles whereas that of imported ones – almost 2.3 times higher (308 roubles).

The average price of VEDs (206 roubles) was lower than the weighted average price for other drugs (316 roubles). It shows that the shift in sales towards expensive drugs in the VED segment was less perceptible than across the whole market.

Figure 13 shows the price index for various drug groups.

Table 5

Top 20 brands by value, 2021

Ranking	Change against 2020	Brand	Sales volume, mln roubles	Share	Growth to 2020
1	+1	Arbidol	**17 237.6**	**1.48%**	**49.5%**
2	-1	Xarelto	**14 524.4**	**1.25%**	**24.2%**
3	+4	Eliquis	**12 458.3**	**1.07%**	**79.6%**
4	-1	Ingavirin	**8 622.8**	**0.74%**	**-21.9%**
5	-1	Nurofen	**8 442.1**	**0.72%**	**6.8%**
6	-	Detralex	**7 694.8**	**0.66%**	**4.7%**
7	+16	Heptral	**7 185.7**	**0.62%**	**50.0%**
8	-	Pentalgin	**6 963.6**	**0.60%**	**2.3%**
9	+1	Mexidol	**6 827.7**	**0.59%**	**4.0%**
10	-1	TheraFlu	**6 668.0**	**0.57%**	**-0.6%**
11	+1	Cardiomagnyl	**6 293.9**	**0.54%**	**1.8%**
12	-7	Miramistin	**6 194.9**	**0.53%**	**-20.8%**
13	+1	ACC	**6 009.9**	**0.52%**	**8.6%**
14	-1	Concor	**5 921.8**	**0.51%**	**-2.5%**
15	-	Linex	**5 731.4**	**0.49%**	**5.6%**
16	+10	Nimesil	**5 642.8**	**0.48%**	**25.3%**
17	-	Amoksiklav	**5 505.6**	**0.47%**	**4.2%**
18	-2	Lorista	**5 412.4**	**0.46%**	**1.3%**
19	+1	Voltaren	**5 395.8**	**0.46%**	**7.7%**
20	+20	Grippferon	**5 335.9**	**0.46%**	**48.1%**

Figure 12

VEDs/non-VEDs sales ratio, 2020-2021

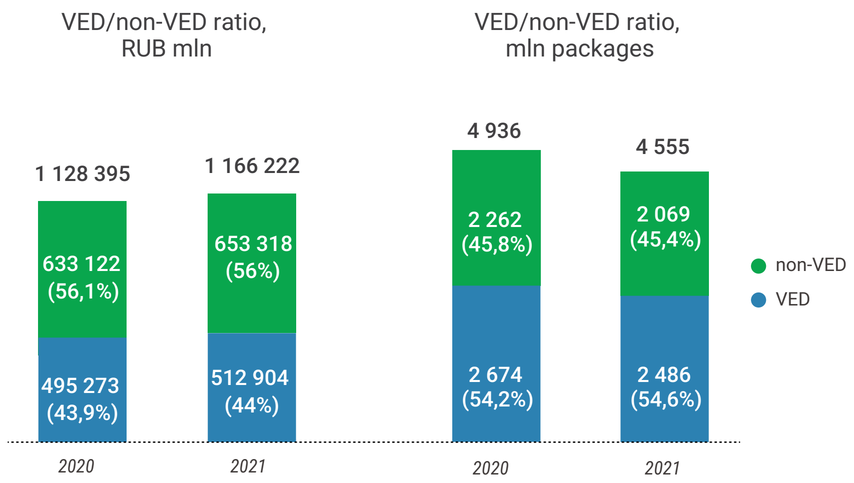
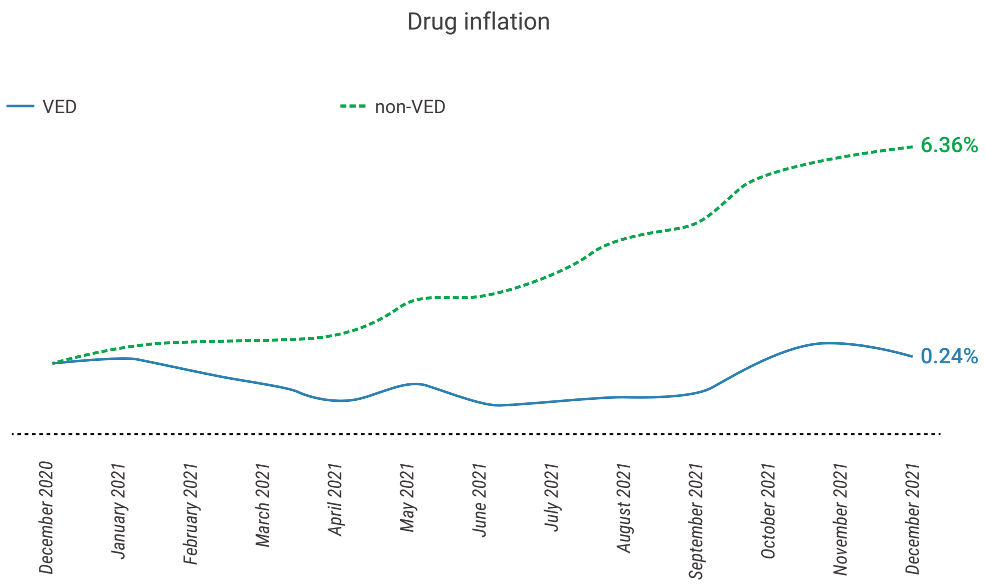


Figure 13

Price index dynamics on the retail market, 2021



In 2021, drug inflation was 3.7%, which is twice lower than in 2020 (7.3%). In 2021, inflation affected more non-VEDs and came to 6.4%. Prices for VEDs rose but slightly, certain periods saw deflation. In the end, the figure came to only 0.2% for the year. This is mainly due to the fact that VEDs were subject to a large-scale indexation at the end of 2020; in 2021, prices were no longer indexed.

The sales ranking for INNs from the VED list is shown in Table 6. The leader of the VED INN ranking is Umifenovir: in 2021, its sales grew by 57.1% compared with the previous year. In the previous years, the first-ranking was Xylometazoline: at the end of 2020, it ranked second.

The ranking noticeably changed: one new INN is in the top 20, it is centrally acting hypertensive Moxonidine (+3 position lines; +7.6% against 2020).

Besides the leader, high dynamics were demonstrated also by anticoagulant Apixaban (+79.6% to 2020) and hepatoprotector Ademetionine (+40.9%). As a result, drugs with these active ingredients strengthened their positions by moving 8 lines upwards.

Price segmentation of retail market drugs

The weighted average per package price was 256 roubles, which is by 12.0% higher than in 2020. Russians tend to be less attracted by cheap drugs; pharmacy consumers tend to buy more expensive medicines and bigger packages.

Figure 14 shows the commercial market structure and the average per package price by price segments in 2020–2021.

Over the year, the market structure in roubles changed by shifting towards the high price segment compared with the previous year. All categories except for drugs priced “over 500 roubles” demonstrated negative sales dynamics. Sales of drugs priced over 500 roubles grew by 12.1% in roubles, and by 10.7% in packages. Owing to this, the share of expensive drugs increased by 3.8% in rouble and by 2.2% in volume terms. It is worth noting that this segment

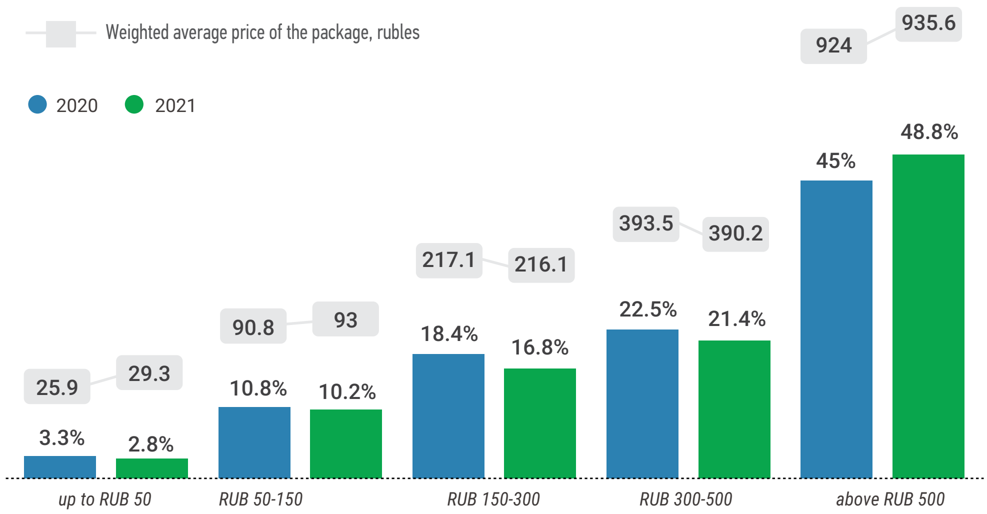


Figure 14

Value sales structure, retail market, by price segments, 2020-2021 is growing from year to year. There are several reasons for that, such as exit of drugs from the market, increase in prices, re-classification of drugs, and variations in the scope of the consumer basket.

In 2021, the "below 50 roubles" category lost its lead in packages: due to the decline in sales, its share dropped by 4.7% in volume and by 0.5% in value. If measured for several years, the drop in the share is more distinct: from 38.2% in packages and from 4.5% in roubles in 2018.

The most stable segment is «150–500 roubles» – over a long period of time its share remains at 30–33% in volume terms.

Price index of drugs on the retail commercial market

For an objective analysis of changes in the prices for drugs in the retail segment of the pharmaceutical market, we have studied the price index measured on the basis of a fixed list of finished pharmaceutical products.

In December 2021, prices rose by 3.7% against December 2020, whereas a year earlier that indicator was at 7.3%.

In 2021, inflation for drugs was lower than the overall consumer price index reported by Goskomstat (the State Statistics Service) (8.39%).

It is of note that before the summer 2021 prices grew but slightly and started rising more from the autumn. The demand for Covid-19 drugs made this trend grow even more.

In 20201, Rosstat significantly increased the size of the basket of drugs for the calculation of the monthly inflation – from 40 to 53 names. Five of them – Azithromycin, Ceftriaxone, Oseltamivir (Nomides brand), Apixaban (Eliquis), and Vitamin D3 are prescribed to patients with the novel coronavirus infection.

Figure 16 shows the overall consumer price index and price indices for individual categories of goods and services.

Figure 15

Change in prices for drugs on the Russian retail market, 2021

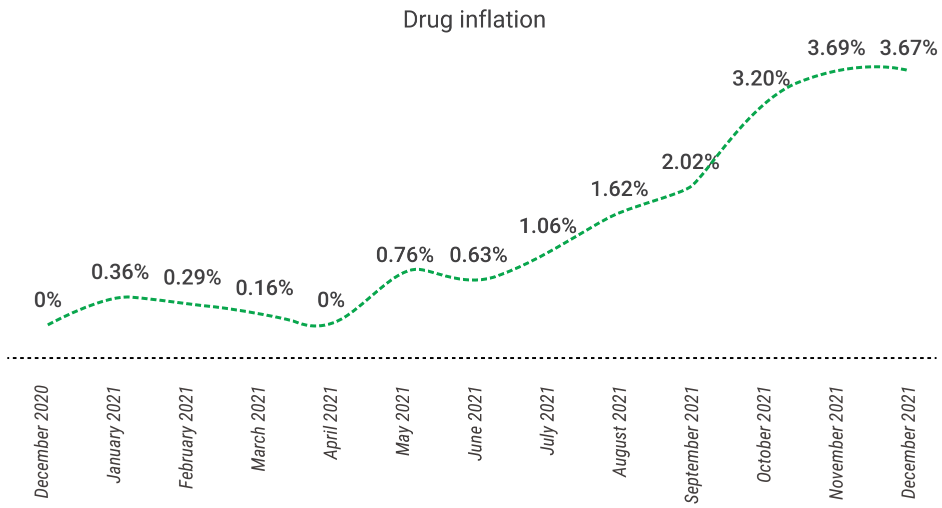


Table 6

Top 20 INNs on the VED list, by value of sales, in 2021

Ranking	Change against 2020	INN	Share in sales of VEDs, roubles	Sales volume, billion roubles	Leader among brands within INN
1	+1	Umifenovir	**3,9%**	**19,9**	Arbidol
2	-1	Xylometazoline	**3,6%**	**18,2**	Snup
3	+1	Rivaroxaban	**2,8%**	**14,5**	Xarelto
4	-1	Ibuprofen	**2,5%**	**13,1**	Nurofen
5	+8	Apixaban	**2,4%**	**12,5**	Eliquis
6	+1	Pancreatin	**2,1%**	**10,9**	Creon
7	-1	Bisoprolol	**2,1%**	**10,9**	Concor
8	-3	Imidazolyl Ethanamide Pentandioic Acid	**1,7%**	**8,6**	Ingavirin
9	+8	Ademetionine	**1,6%**	**8,2**	Heptral
10	+4	Interferon alpha-2b	**1,6%**	**8,1**	Grippferon
11	-	Atorvastatin	**1,4%**	**7,4**	Atorvastatin
12	-3	Amoxicillin + [Clavulanic acid]	**1,4%**	**7,1**	Amoksiklav
13	-3	Losartan	**1,3%**	**6,7**	Lorista
14	+5	Ursodesoxyholic acid	**1,3%**	**6,7**	Ursosan
15	+3	Acetylcysteine	**1,3%**	**6,7**	ACC
16	-4	Omeprazole	**1,3%**	**6,6**	Omeprazole
17	-9	Azithromycin	**1,3%**	**6,6**	Azithromycin
18	-3	Metformin	**1,2%**	**6,3**	Glucophage Long
19	+1	Ethylmethylhydroxypyridine succinate	**1%**	**5,3**	Mexidol
20	+3	Moxonidine	**1%**	**5**	Moxonidine

Rosstat confirmed the assessment of 2021 inflation in Russia at 8.39%. In 2021, the consumer price index hit is maximum, having significantly grown since 2016 (2016: 5.4%; 2017 - 2.5%; 2018 – 4.3%; 2019 – 3.0%; 2020 - 4.9%). So, the agency affirmed to the nearest hundredth its preliminary assessment of 2021 inflation announced at the end of December.

According to Rosstat, the highest growth was in prices for food products – by 10.62%, which is 1.6 more than in the previous year (6.7% in 2020).

Petrol prices rose on the whole in 2021 by 8.84%, prices for non-foods grew by 8.58%. The lowest growth was in prices for services (4.98%).

The Bank of Russia affirmed its 2022 inflation forecast within 4–4.5%. The Russian government forecasts 2022 inflation at 4.0%.

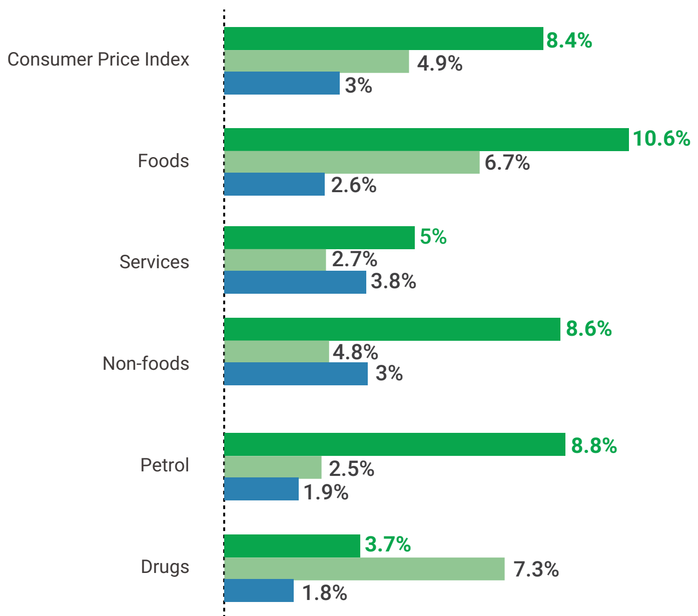
New drugs on the retail market

In 2021, over 300 new drug brands (220 INNs) appeared on the commercial pharmaceutical market. At the end of the year, sales of novelties totalled 1,078 million roubles, or 2.5 million packages, which is equivalent to 0.09% and 0.05% of the overall pharmacy sales of all drugs, in value and in volume, respectively. The weighted average per package price of novel drugs was 431 roubles. Compared with 2020, sales of novel drugs on the commercial market fell twice, the growth in the per package price dropped by 6%.

The ratio of domestic to foreign brands in novel drugs of 2021 was 84% to 16%. Compared with the similar ratio for 2020 (78% to 20%) and for 2019 (77% to 23%), now Russian drugs prevail, which speaks of the increasing growth of the market share of made-in-Russia drugs in the retail segment, in particular, due to the emergence of new positions on the market.

Figure 16

Consumer price index in Russia



2/3 of brands are represented by prescription drugs accounting for 60% of sales of novelties.

Among novel drugs, most of pharmacies' revenues came from non-steroidal anti-inflammatory drugs (9 brands; the best-selling novelty is Resulide by Remedia), topically applied antifungals (3 brands; Fungoderil by Stada), and sympathomimetics for inhalation (5 brands; Respiforb by Rus Biopharm).

Most of the top 20 are novel drugs from Russian companies (11 names). All drugs among the ranked novelties with the highest sales volumes are generic drugs, except for original Ilsira by Biocad. All in all, only 42 names out of 308 new brands are original drugs (around 5% of sales of novelties in roubles).

Ilsira is an original drug in the form of a solution for subcutaneous injection on the basis of anti-interleukin-6 receptor monoclonal antibodies. The drug is recommended to be used in the treatment of patients with rheumatoid arthritis and with moderate and severe COVID-19. The interleukin inhibitor is a prescription-only drug and is on the VED list. The drug is rather expensive: in 2021, the weighted average price in pharmacies was around 62,845 roubles per package.

By the volume of retail sales in value, the key brand among the novelties that appeared on the Russian market in 2021 was Resulide from Russian Remedia. Its sales were worth 162.1 million roubles. The marketing authorization files classify Resulide as belonging to the therapeutic group of NSAID. The main active ingredient of Rx Resulide is nimesulide - Cox-2 selective inhibitor. The drug is available in the form of tablets and granules for oral suspension and is used to treat acute pain, in the symptomatic treatment of painful osteoarthrosis (osteoarthritis), in primary algodysmenorrhea.

The second-ranking is Stada's Fungoderil (INN-Naftifine). Fungoderil is an OTC anti-fungal topical solution used to treat fungal skin infections, interdigital mycosis, fungal nail infections, cutaneous candidosis, tinea versicolour, and dermatophytosis. In 2021, its sales were worth 158.2 million roubles.

Ranking third is Respiforb (by Rus Biopharm), worth 85.3 million roubles. It is a combination bronchodilator in the form of capsules with inhalation powder. Its active ingredients are budesonide and formoterol; the drug is prescribed for patients with bronchial asthma and COPD.

In 2021, Severnaya Zvezda (Russia) launched three new drug brands on the market, two of them got into the top 20 novelties by value of sales: gastroprotective agent Rebamipide (ranking 6th) and antimicrobial and antiprotozoal Nifuratel (ranking 12th).

It should be added that most of the drugs that appeared in 2020 were antivirals; in 2021, the market was getting back to its pre-pandemic patterns, and the number of emerging drugs to treat the coronavirus infection was decreasing. Compared with 2020, the total market for novel drugs shrank more than twice, which is another sign that the market is returning to normal. In the previous year, over 40% of all costs on novel drugs from among the top 20 were on COVID-19 drugs; 2021 did not see such concentration of sales in the novelty segment. It means that less money is invested in novel drugs to treat COVID-19 and that companies seem to be willing to diversify their portfolios.

Table 7

Top 20 new brands on the Russian commercial market, 2021, by value volume

Ranking	Brand	Manufacturer	Sales volume, million roubles	Date of appearance in pharmacies
1	Resulide	Remedia	**162.1**	January 2021
2	Fungoderil	Stada	**158.2**	March 2021
3	Respiforb	Rus Biopharm	**85.3**	January 2021
4	Ilsira	Biocad	**47.3**	May 2021
5	Tarzhifort	Avexima	**43.0**	January 2021
6	Rebamipide	Severnaya Zvezda	**40.3**	April 2021
7	Kardevit AS	PharmVILAR	**38.3**	February 2021
8	Sodium Alginate	Tula Pharmaceutical Factory	**30.2**	March 2021
9	Vitamin D3	KRKA	**29.5**	February 2021
10	Rinorgol	Farmaktiv	**29.0**	June 2021
11	Actitropil	Pharmstandard	**20.8**	March 2021
12	Nifuratel	Severnaya Zvezda	**20.5**	January 2021
13	Heli-Stop	Avva Pharmaceuticals	**20.4**	January 2021
14	Acrimex	Polpharma	**20.2**	August 2021
15	B12 Ankermann	Woerwag Pharma	**19.9**	May 2021
16	Diprometa	S.C.Rompharm Company	**17.1**	April 2021
17	Relifipin	Bayer	**15.6**	June 2021
18	Renoproctol	Yuzhpharm	**14.4**	August 2021
19	Ditamal	World Medicine	**12,3**	July 2021
20	Tussiofit	Danhson	**11,7**	June 2021

3. Drug reimbursement program (DRP)

Pharmaceutical benefits are one of the most essential elements of any healthcare development programme. At the end of 2021, publicly funded drugs accounted for nearly 42% (plus 6 percentage points to 2020). This growth was, among other things, due to the epidemiological situation in the country (the spread of Covid-19) and on account of the allocation of public funds for additional programmes (for more detail see "Hospital Purchases").

Some of the funds are expended on providing vulnerable population categories with public social benefits (purchases of necessary drugs for benefit-entitled social groups). It must be said that despite a reduction of this segment in the total volume of the pharmaceutical market (2019: 16%, 2020: 13.2%, 2021: 12.6%), amounts of the allocated funds are not decreasing (except for 2020 when the decrease was mainly due to the pandemic and restrictions that for some time blocked the public access to doctors and to the prescription of drugs).

Prescription of drugs to benefit-entitled social categories is financed at the expense of the budgets at two levels:

- At the federal level – under two programmes, the Essential Drug Coverage (EDC) and the High-Cost ICD.
- At the regional level – we can refer to purchases governed by Order of the Government of the Russian Federation No. 890 dated July 30, 1994 «Concerning the State Support for the Development of the Medical Industry and the Enhancement of Provision of the Population and Health Care Institutions with Medicines and Medical Products», as well as to purchases of orphan drugs, governed by the regulatory and legal acts of the subjects of the Russian Federation.

Each drug reimbursement sub-programme provided for the purchases of specific drugs. One of the legislative novelties in force from 2021 was the abolishment of such drug lists (except for high-cost ICD). As a result, benefit-entitled social categories are provided free of charge with drugs to an extent no less than envisaged as per the VED list. The list of vital and essential drugs will be reviewed at least once a year and will be revised as many times as may be necessary.

Most of the federal funds are allocated for the **"High-Cost ICD"** sub-programme. Now it covers 14 codes and drugs under 42 INNs. In January 2021, 4 new names were added to the drug list: Taliglucerase alfa (Elyso), Ocrelizumab (Ocrevus), Simoctocog alfa (Nuwiq) and Emicizumab (Hemlibra). The allocated budget is not increasing, though. In 2021, 64.3 billion roubles were allocated for the purchases of drugs under 14 ICD codes. In 2022–2023, 66.9 billion roubles are envisaged to be annually expended under this sub-programme. Hence, no new codes are expected to be added.

In 2021, the government looked into adding to the list antineoplastic drugs – Acalabrutinib, Venetoclax, Nilotinib, Pembrolizumab, Ibrutinib, and Siponimod. But the initiative was rejected because of the High-Cost ICD budget deficit. According to Item 3 (1) of the rules of making lists of drugs, approved as per Government Order No. 871 dated 28.08.2014, a drug cannot be approved to be included in High-Cost ICD if its inclusion increases the budget.

Another reason for the High-Cost ICD budget deficit was the increased number of the benefit-entitled social categories falling within the scope of the sub-programme: in 2019, there were 146 thousand people in the federal register, whereas in 2021 the register listed around 165.7 thousand people, which is by 21% more. The amount of the allocated funds grew over that period by 9%. That is why, some of the necessary drugs for benefit-entitled social categories have to be funded at the expense of the regional budgets.

All told, the 2022 list of drugs for the treatment of high-cost ICD has been added with four drugs for patients who suffer from the diseases already envisaged by the programme: multiple sclerosis (Cladribine), multiple myeloma (Pomalidomide, Ixazomib), and hemophilia (Efmoroctocog alfa).

The Essential Drug Coverage (EDC) programme is governed by Federal Law No. 178-FZ dated July 17, 1999 «Concerning the Government Social Assistance" and encompasses 9 social categories: disabled, disabled children, disabled war veterans, World War II participants, combat veterans, and others. Rates of allowance for those entitled to this social service are set each year. In 2021, the rate of allowance was at 929.8 roubles. In 2022, the basic programmes were index-adjusted by 4.3 percent, and the allowance per person will amount to around 970 roubles. These rates are used to calculate the amount of the social service for those entitled to federal benefits, unless they choose instead to get said amount in cash (Government Order No. 1145 dated July 31, 2020). These rates also serve as the basis to calculate the total amount of funds allocated for the EDC sub-programme. To reimburse those entitled to federal benefits for drugs, the regions will get 40.7 billion roubles as subsidies and another 13.6 billion roubles by other inter-budgetary transfers. All in all, the allocated funding will amount to 54.3 billion roubles.

Specific social categories are entitled to benefits when buying drugs, regardless of whether or not they are eligible for social assistance. These are people with disabilities, World War II participants, and other benefit-entitled categories. They can be provided with drugs free of charge or at a 50% discount, even if they refused social packages. Procedures for the provision of such drugs are governed by the laws of the subjects of the Russian Federation. According to the DSM Group's estimates, the scope of the **regional programme** is comparable with that of the federal programme, and in the last 2 years goes beyond it.

Before 2022, subsidized drugs could be dispensed only by state-owned social pharmacies participating in the drug reimbursement programme. On January 15, 2022, Moscow launched a pilot initiative on the release of subsidized drugs by e-prescriptions in commercial pharmacies. The Moscow City Government approved a list of drugs that can be dispensed under the pilot project. If a patient wants to get a drug of a certain brand name, the patient can pay in addition.

Pharmacies will be monthly subsidized in an amount equal to the cost of dispensed drugs. The pilot initiative applies to Moscow residents entitled to regional benefits.

In 2021, 160 million packages of drugs purchased for benefit-entitled social categories were worth 254 billion roubles, which is 9% more in roubles than in 2020. On the contrary,

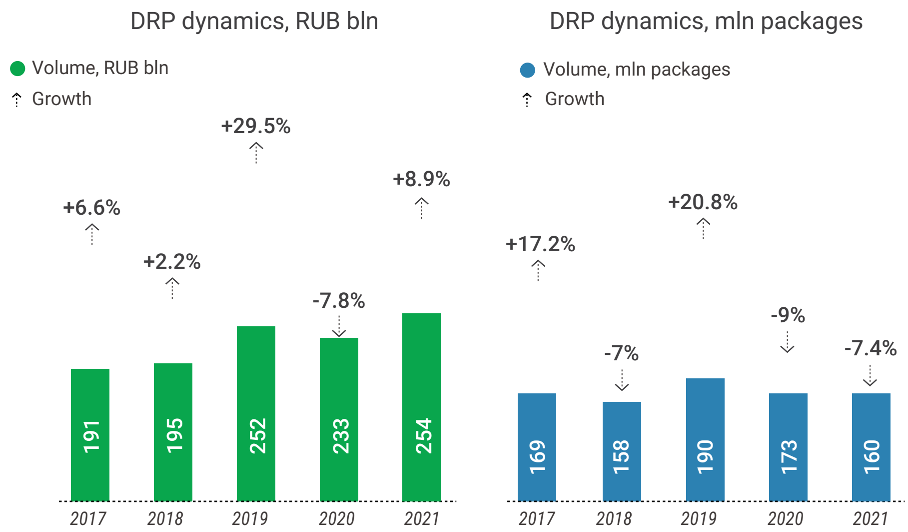


Figure 17

Drug Reimbursement Programme dynamics, 2017-2021

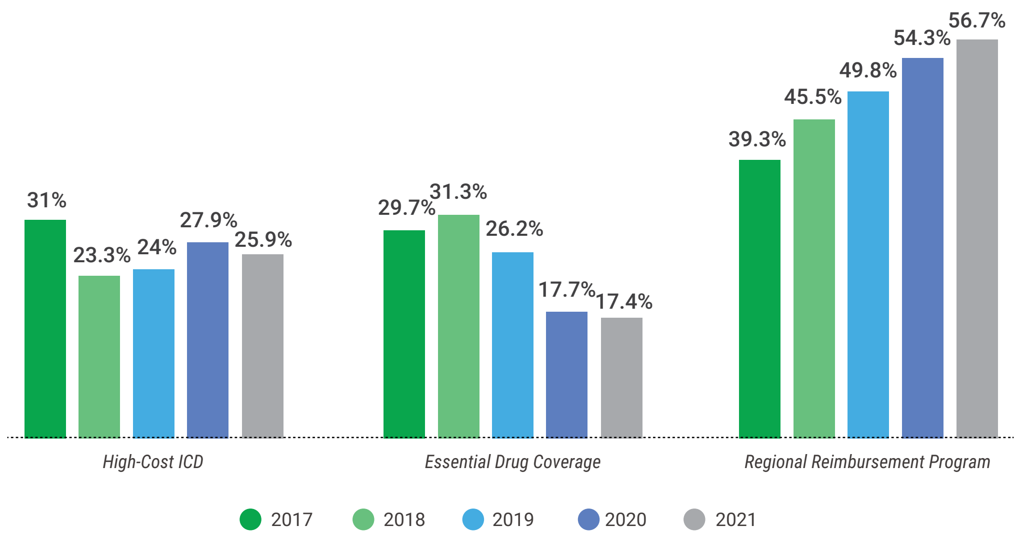
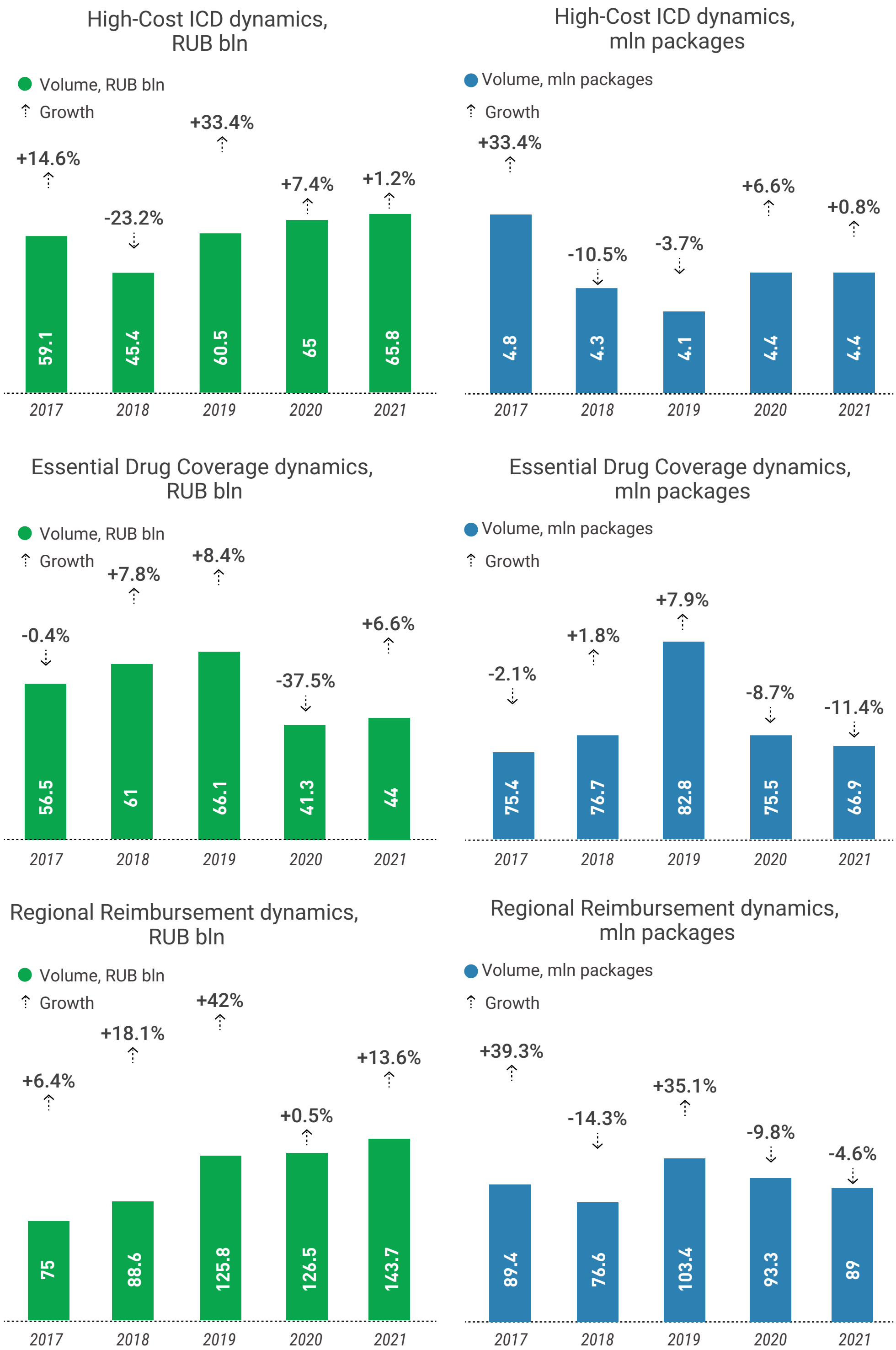


Figure 18

Proportion of costs under High-Cost ICD, Essential Drug Coverage and Regional Reimbursement programmes in the total value of spending in the subsidized drug segment, 2017-2021

Figure 19

Dynamics of costs under reimbursement programmes, 2017-2021



the number of purchased packages dropped by 7%. The analytical data show payments and supplies under contracts performed in 2021.

If reimbursement programmes are analyzed individually, it can be seen that the scope of the regional benefits is augmenting: today, regional benefits already make for 56.7% of the funds allocated for the subsidized segment. The shares of High-Cost ICD and EDC decreased in 2021 to 26% and 17%, respectively. In 2021, 65.8 billion roubles were spent on the High-Cost ICD programme, which is 1.2% more than in 2020, and around 4.4 million packages were sold, which is 0.8% more compared with the previous year.

In 2021, 44.0 billion roubles were spent under the Essential Drug Coverage programme, which is 6.6% more than a year earlier. Decline was observed in volume terms, the number of purchased packages was 11.4% lower than in 2020 and the segment shrank in the end to 66.9 million packages.

The scope of the regional benefits is comparable to that of the federal programme. In 2021, it even went beyond it. In 2021, the drugs purchased were worth 143.7 billion roubles (+13.6% against 2020), which makes 89.0 million packages (-4.6%).

Imported/localized drug ratio in drug reimbursement

Most of the drugs purchased under DRP are original high-cost drugs, which in most cases are imported ones, and in 2021 we observed that their share in the total purchases increased. Over the year, the share of localized drugs in volume terms dropped by 4.3% (Fig. 19). At the same time, in value terms the trend towards an increasing share of drugs made in Russia remains: in 2021, their share grew by 0.1%. Consumption of drugs made in Russia increased by 9% in roubles and decreased by 12% in packages. Costs on purchases of imported drugs were also above the level of 2020: by 9% in money and by 12% in packages.

So, in money terms the localized to imported drug ratio remained in favour of imported ones. In 2021, they accounted for 63% in value terms; drugs made in Russia made for 37% only.

The import substitution trends were first seen

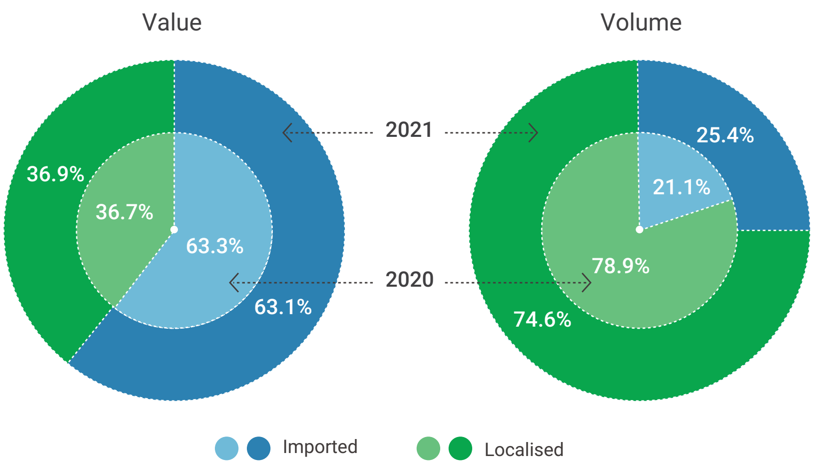


Figure 20

Imported/localized drug sales ratio, 2021 for drugs that are available and purchased mainly under reimbursement programmes. That is why localized drugs account for the largest share in this segment. Excluding foreign drugs made in Russia, domestically-produced drugs would have accounted only for 25.7% in roubles. Thus, the process of «localization» drives the indicator up by 9%.

According to the data for 2021, the price of a localized drug was at 781 roubles and of an imported one – at 3,930 roubles.

The ratio of sales of imported and localized drugs under 14 ICD Codes, Essential Drug Coverage and Regional Drug Reimbursement programmes is shown in Figure 21.

In DRP corresponding to high-cost codes, the share of localized drugs in roubles notably grew against the level of 2020 – by 10%, to make for 43%. This is the segment where imported drugs hold the highest share in packages (54%), +2% over the year.

Under the Essential Drug Coverage programme, the share of imported drugs increased to come to around 53% in money (against 50% in 2020). In packages, localized drugs held about 82% of the market (in 2020, their share was somewhat larger – 84%). So, the volumes of purchases of high-cost imported drugs are growing.

In regional benefit programmes, imported drugs prevail in money (69%, with their share increasing from 66% in 2020), in packages localized drugs account for 70% (-7% to 2020).

Below are the top 10 INNs (out of the top 100 by volume in roubles), with respect to which a noticeable shift from imported to Russian drugs was observed.

Two active substances (Insulin Lispro and Eptacog alfa activated) on the list reflect a noticeable increase in the share of Russian drugs, which in 2020 were already far ahead by purchase volumes within INNs.

Rx/OTC drugs ratio in drug reimbursement

Drug reimbursement programmes offer mainly Rx drugs that are prescribed strictly according to indications.

In 2021, Rx drugs made for 98% in value terms (-0.7% against 2020), and for 93% (-0.8%) in volume terms.

Figure 21

Imported/localized drugs sales ratio under sub-programmes, 2021

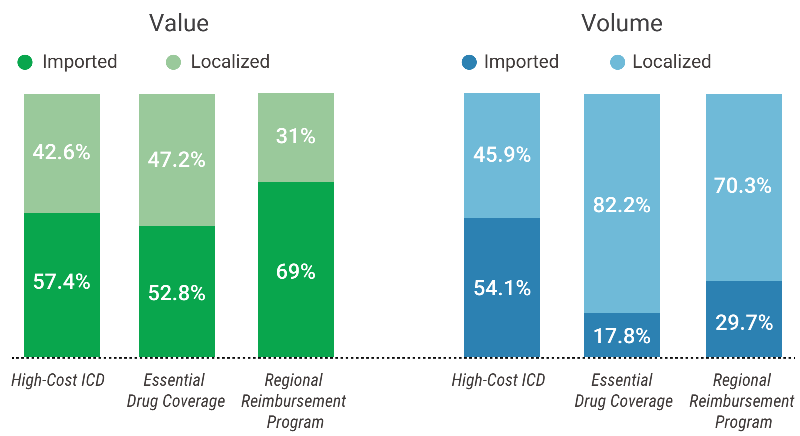


Table 8

Top 10 INNs in terms of import substitution, 2021

INN	Share of domestic drugs in roubles, % 2020	Share of domestic drugs in roubles, % 2021	'Shift' drug	Leader 2020 (manufacturer)	'Shift' drug in 2021 (manufacturer)
Pomalidomide	**21.0%**	**95.9%**	**+75.0%**	Imnovid (Bristol-Myers Squibb)	Pomalidomide-Tl (R-Pharm) Imatango (Protek)
Tacrolimus	**7.8%**	**63.0%**	**+55.2%**	Advagraf (Astellas)	Priluxid (Pharmasyntez)
Interferon beta-1a	**0.0%**	**50.1%**	**+50.1%**	Rebif (Merck & Co), Cinnovex (Cinnagen)	Teberif (Biocad)
Human normal immunoglobulin	**8.2%**	**29.4%**	**+21.2%**	Privigen (CSL Behring)	Gabreglobine (Immuno-Gem)
Macitentan	**0.0%**	**16.9%**	**+16.9%**	Opsumit (Johnson & Johnson)	Maxicentan (Bazis)
Icatibant	**0.0%**	**15.2%**	**+15.2%**	Firazyr (Takeda)	Icatibant (Rus Biopharm)
Tiotropium bromide	**10.9%**	**20.7%**	**+9.7%**	Spiriva (Boehringer Ingelheim)	Tiotropium (Pharmstandard) Respium (Rus Biopharm)
Insulin Lispro	**52.2%**	**60.8%**	**+8.6%**	RinLis (Geropharm)	RinLis (Geropharm)
Everolimus	**15.2%**	**23.1%**	**+7.9%**	Afinitor (Novartis)	Nikolimus (Pharmasyntez)
Eptacog alfa activated	**92.7%**	**98.9%**	**+6.2%**	Coagil Generium	Coagil Generium

Table 9

Drug sales structure, by ATC codes, DRP market, 2021

ATC codes 1st level	Purchase value, mln roubles	Share in value terms, %	Purchase volume, mln packages	Share in volume terms, %
Antineoplastic and immunomodulating agents [L]	**112 431.1**	**44.3%**	**11.0**	**6.9%**
Alimentary tract and metabolism [A]	**49 835.7**	**19.7%**	**48.4**	**30.2%**
Blood and blood forming organs [B]	**38 094.5**	**15.0%**	**13.5**	**8.4%**
Respiratory system [R]	**10 562.5**	**4.2%**	**23.6**	**14.7%**
Nervous system [N]	**9 365.3**	**3.7%**	**3.5**	**2.2%**
Antiinfectives for systemic use [J]	**8 398.0**	**3.3%**	**17.3**	**10.8%**
Musculoskeletal system [M]	**7 546.0**	**3.0%**	**33.0**	**20.6%**
Cardiovascular system [C]	**7 226.4**	**2.9%**	**2.4**	**1.5%**
Systemic hormonal preparations, excluding sex hormones [H]	**4 491.4**	**1.8%**	**2.3**	**1.4%**
Various [V]	**2 857.2**	**1.1%**	**2.2**	**1.4%**
Non-ATC	**1 714.1**	**0.7%**	**0.3**	**0.2%**
Sensory organs [S]	**376.3**	**0.1%**	**0.6**	**0.4%**
Genitourinary system and sex hormones [G]	**335.5**	**0.1%**	**1.6**	**1.0%**
Dermatologicals [D]	**268.6**	**0.1%**	**0.5**	**0.3%**
Antiparasitic products, insecticides and repellents [P]]	**30.6**	**0.0%**	**0.1**	**0.1%**

Structure of sales of drugs under drug reimbursement programmes (DRP) by ATC codes

The ratio of drug purchases in Russia under DRP by ATC codes, 1st level, for 2021 is shown in Table 9.

The ATC code rating in terms of sales volumes under DRP is quite stable. In value terms, the market is fairly highly concentrated – the first three ATC codes make for about 80% of the market.

[L] Antineoplastic and Immunomodulating Agents remain the most funded category under DRP. In 2021, around 44.3% of the total public funds were spent on their purchases. This the most high-priced drug group in DRP – the average weighted price per package was 10,182 roubles. Costs of their purchases increased in roubles by 15.2% against 2020. At the same time, in packages their purchases noticeably dropped – by 31.4%. In packages, a shift towards original drugs was observed. In 2021, Russian Generium's immunosuppressant Elizaria (INN-Eculizumab) ranked first, accounting for 9%, its purchases grew by 36.3%. Second- and third-ranking are Bristol-Myers Squibb's immunosuppressant Revlimid (INN-Lenalidomide), and Johnson & Johnson's protein kinase inhibitor Imbruvica (INN-Ibrutinib). The drugs account for approximately 8% and 4% of the sales volumes in [L] by value.

The volume of the second-ranking ATC code is half that of the leader. In 2021, it is [A] Alimentary Tract and Metabolism (19.7% in roubles). Dispensed amounts exceed those recorded in the previous year by 1.0% in roubles and by 31.4% in packages. About 73.2% of this category belong to drugs used in diabetes ([A10]). In 2021, the leader in this sub-group in terms of value of sales was Sanofi's Toujeo SoloStar (INN-insulin glargine). Novo Nordisk's Levemir (INN-insuline detemir) and AstraZeneca's Forxiga (INN-dapagliflozin) rank 2nd and 3rd, respectively.

The third-ranking is [B] Blood and Blood Forming Organs (15.0%). In 2021, [B] code demonstrated a 8.4% growth in value terms. In packages, its purchases increased by 38.4%.

In the DRP structure, in 2021 [N] Nervous system was no longer among the top five ATC codes: it was replaced by [J] Antiinfectives for systemic use. The share of the 5 key codes grew by 0.6% in value to come to around 86.9%. The highest growth of sales was observed in [L]: over the year, the code's share also noticeably grew, from 41.9% to 44.3%. Antineoplastic and immunomodulating agents are sold mainly under Regional Reimbursement Programmes High-Cost ICD schemes.

Let us see how much money is spent under DRP for the treatment of main diseases groups. We correlated drugs with indications to rank DRP costs by diseases (Table 10).

For several years in a row, the top-ranking are drugs used to treat malignant tumours since oncology has been recently set as a priority area. The leader accounts for 22.9% of the value of the entire DRP segment. 73.8% of drugs are dispensed under the Regional Drug Reimbursement programme. In 2021, this group went positive by gaining 16.6% against the previous period.

Drugs for the treatment of immunologic diseases rank second, their purchases also increased, by 13.7%. Most of costs fall within the High-Cost ICD segment (61.6%).

In 2021, the third-ranking belongs to drugs used in diabetes, which were dispensed mainly on the regional level (68.0% in roubles).

Volumes of drug groups for the treatment of skin diseases grew most of all (+67.5%) owning to the increased purchases of: topically applied glucocorticosteroid Beloderm (+241.2%), dermoprotector Radevit (+219.8%), and interleukin inhibitor Dupixent (+99.0%). These brands are purchased mainly through the regionally subsidized segment.

Manufacturers in the DRP segment

Table 11 shows the top 20 manufacturers leading by the consumption volume in DRP in 2021.

In 2021, drugs under the Drug Reimbursement Programme were purchased from 494 manufacturers. Only 32 companies are involved in the High-Cost ICD programme; 267 participate in the Essential Drug Coverage schemes; regionally subsidized drugs are purchased from 472 companies. This is due to the fact that lists of drugs under High-Cost ICD programmes are legislatively regulated whereas other schemes offer benefits according to the needs of each benefit-entitled category.

There are significant changes in the ranking: only 4 companies managed to retain their last year's positions. The ranks of the others changed. In 2021, the top rated is Russian Generium (7.3% in roubles of subsidized drugs), its sales grew by 19.2% for the year. The bio-engineering company intends to produce equivalents of high-cost imported original drugs. The government purchases as many as 9 drug brands from the company. Sales volumes grew primarily on account of the increase in sales of hemostatic agent Octofactor (+122.9% to 2020), and immunosuppressant Elizaria (+36.3%).

Last year's leader, Johnson & Johnson, with a 6.1% share, moved down to rank second, with a 2.5% decrease (against the previous year) in purchases of drugs from its portfolio. The range of drugs purchased under subsidized

Figure 22

DRP ratio of sales volume in value by ATC codes, 2021

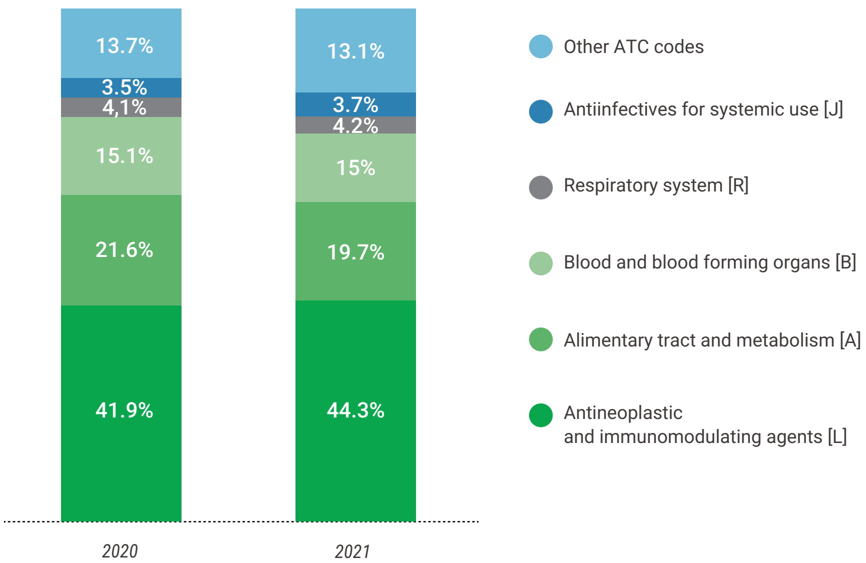


Table 10

DRP costs ranking by disease, in value terms, 2021

Disease	Purchase volume, mln roubles	Growth, %	Share, roubles, %		
			High-Cost ICD	Essential Drug Coverage	Regional Drug Reimbursement
Oncological diseases	58 080	16.6%	14.3%	11.9%	73.8%
Immunologic diseases	54 351	13.7%	61.6%	9.1%	29.3%
Diabetes mellitus	38 031	3.1%	-	32.0%	68.0%
Diseases of blood and blood forming organs	37 793	8.3%	47.5%	13.4%	39.0%
Gastrointestinal diseases	13 096	-10.3%	37.2%	12.7%	50.1%
Respiratory diseases	10 562	10.4%	9.6%	26.2%	64.2%
Nervous disorders	9 384	15.0%	-	8.8%	91.2%
Diseases caused by various infectious agents	8 398	1.9%	-	28.0%	72.0%
Musculoskeletal disorders	7 226	-3.5%	-	15.1%	84.9%
Cardiovascular diseases	6 000	8.6%	-	31.0%	69.0%
Hormonal disorders	5 359	24.3%	-	39.6%	60.4%
Other	4 491	-7.4%	3.5%	45.3%	51.1%
Eye diseases	376	67.5%	-	40.8%	59.2%
Skin diseases	335	-9.7%	-	16.7%	83.3%
Male and female reproductive disorders	50	-22.2%	-	17.5%	82.5%

Table 11

Top 20 drug manufacturers by DRP consumption, 2021

Ranking	Change against 2020	Manufacturer	Purchase volume, mln roubles	Share, %	Growth, % 2021/2020
1	+1	Generium	**18 495**	**7.3%**	**19.2%**
2	-1	Johnson & Johnson	**15 443**	**6.1%**	**-2.5%**
3	+1	Novartis	**13 704**	**5.4%**	**2.2%**
4	+1	Sanofi	**12 472**	**4.9%**	**-3.4%**
5	-2	Bristol-Myers Squibb	**12 021**	**4.7%**	**-19.2%**
6	+2	AstraZeneca	**10 714**	**4.2%**	**29.9%**
7	+7	F.Hoffmann-La Roche	**9 159**	**3.6%**	**75.8%**
8	-2	Novo Nordisk	**9 138**	**3.6%**	**-9.9%**
9	-2	Biocad	**9 004**	**3.6%**	**-3.9%**
10	-	Pfizer	**8 877**	**3.5%**	**27.6%**
11	-2	Baxter	**7 484**	**3.0%**	**-5.1%**
12	+1	Bayer	**7 470**	**2.9%**	**40.3%**
13	+3	Boehringer Ingelheim	**6 256**	**2.5%**	**29.0%**
14	+9	Pharmasyntez	**6 122**	**2.4%**	**103.0%**
15	-	GlaxoSmithKline	**5 511**	**2.2%**	**6.2%**
16	+4	Astellas	**4 960**	**2.0%**	**35.5%**
17	-5	Biogen	**4 306**	**1.7%**	**-20.6%**
18	-	Merck & Co	**4 008**	**1.6%**	**-2.9%**
19	-	Nativa	**3 863**	**1.5%**	**4.6%**
20	+5	Geropharm	**3 757**	**1.5%**	**40.7%**

and reimbursement programmes comprised 37 brands. There was a drop in sales of 5 out of the 10 key brands of the company. The biggest drops in purchases were observed for monoclonal antibodies Tysabri (-38.9% against 2020) and Darzalex (-14.0%). Purchases of antiplatelet agent Upbravi grew by 311.4%.

Ranking third in 2021 is Novartis (5.4%). The manufacturer's sales volumes for the year grew by 2.2%. The company's portfolio in the reimbursement segment of the market shrank from 87 to 76 brands. Against 2020, the most demanded were: Uperio (+131.7%) used to treat cardiac failure and essential arterial hypertension; and antineoplastic Risarg (+67.4%) used in the treatment of female breast cancer.

The manufacturer that gained in the ranking most of all was Russian Pharmasyntez (+9 position lines; +103.0% to 2020) – its portfolio grew from 82 to 87 brands. Number one brand in purchases was Advagraf analog – immunosuppressant Priluxid (+4 299.1%), INN-tacrolimus.

At the end of 2021, thanks to the import substitution scheme there were already five Russian manufacturers in the top 20 by value of sales volumes.

Table 12 shows the rating of manufacturers participating in the 14 ICD Codes, Essential Drug Coverage and Regional Drug Reimbursement programmes.

Generium came out on top in the 14 ICD Codes programme; top-rated in the Essential Drug Coverage and Regional Drug Reimbursement programmes were Sanofi and Johnson & Johnson. Several Russian manufacturers participate in each of the sub-programmes; most Russian manufacturers are found among the top 20 manufacturers of drugs in the Essential Drug Coverage segment (7 companies) and in the High-Cost ICD scheme (6 companies). In the regional subsidized segment, only two Russian manufacturers – Generium and Geropharm – are in the top twenty.

Drugs in the DRP segment

In 2021, the top 20 brands accounted for 30.4% of the value volume, which is 1.5% less than a year earlier.

Ranking top is a novelty of 2019, Russian Generium's immunosuppressant Elizaria (+36.3%). Second in value is Bristol-Myers Squibb's foreign-made immunosuppressive agent Revlimid (-15.6% against 2020). Sanofi's long-acting insulin analogue Toujeo SoloStar (-15.1%) ranks third.

The rating of 2021 changed dramatically. Eight drugs in the top twenty are seen in the rating for the first time. The most successful among the ranked drugs are: F.Hoffmann-La Roche's Ocrevus (+120 position lines) for patients with multiple sclerosis; Boehringer Ingelheim's antidiabetic agent Jardiance (+33 position lines); AstraZeneca's antidiabetic agent Forxiga (+18 position lines); and Generium's hemostatic agent Octofactor (+17 position lines). These are the brands that ultimately had the highest rate of growth in purchase volumes (+617.0%; +68.8%; +66.3%, and +122.9%, respectively).

The weighted average price in the top 20 brands was 7,129 roubles/package. The most expensive was intrathecal Spinraza for SMA patients: the weighted average price is about 1.2 million roubles per package. The «cheapest» in the top 20 was antihyperglycaemic agent Galvus (719 roubles).

Most of the leading drugs belong to [L] Antineoplastic and Immunomodulating Agents (10

Table 12

Top 20 drug manufacturers by purchase volumes in DRP segment under High-Cost ICD, Essential Drug Coverage and Regional Drug Reimbursement programs, 2021

Ranking	High-Cost ICD		Essential Drug Coverage		Regional Drug Reimbursement	
	Manufacturer	Purchase volume, mln roubles	Manufacturer	Purchase volume, mln roubles	Manufacturer	Purchase volume, mln roubles
1	Generium	**12 424**	Sanofi	**3 672**	Johnson & Johnson	**10 293**
2	Bristol-Myers Squibb	**8 212**	Novartis	**3 103**	Novartis	**8 985**
3	Biocad	**6 163**	Novo Nordisk	**3 021**	AstraZeneca	**8 738**
4	Baxter	**6 024**	Boehringer Ingelheim	**2 321**	Sanofi	**7 561**
5	Johnson & Johnson	**4 181**	Bayer	**2 071**	Pfizer	**6 811**
6	F.Hoffmann-La Roche	**4 066**	Pfizer	**1 977**	Novo Nordisk	**6 117**
7	Pharmasyntez	**3 395**	AstraZeneca	**1 976**	Generium	**6 065**
8	Octapharma	**2 687**	Geropharm	**1 399**	Bayer	**5 400**
9	CSL Behring	**1 764**	Pharmstandard	**1 286**	GlaxoSmithKline	**4 992**
10	Novartis	**1 616**	Biocad	**1 111**	F.Hoffmann-La Roche	**4 148**
11	Catalent	**1 536**	Bristol-Myers Squibb	**999**	Biogen	**4 092**
12	Astellas	**1 321**	Johnson & Johnson	**969**	Boehringer Ingelheim	**3 935**
13	Sanofi	**1 239**	F.Hoffmann-La Roche	**945**	Astellas	**3 246**
14	Takeda	**1 184**	Protek	**904**	Amgen	**3 149**
15	CinnaGen	**1 115**	Fresenius	**874**	Bristol-Myers Squibb	**2 809**
16	R-Pharm	**1 029**	Ipsen	**828**	AbbVie	**2 772**
17	Kedrion	**996**	Nativa	**817**	Merck & Co	**2 706**
18	Dr.Reddy's	**991**	Pharm-Sintez (Moscow)	**744**	Geropharm	**2 358**
19	Chemical Diversity Research Institute	**985**	Ozon	**728**	Teva	**2 318**
20	Nativa	**789**	AbbVie	**724**	Takeda	**2 316**

brands). Second comes [A] Alimentary Tract and Metabolism (5 brands). The third-ranking in this respect is [B] Blood and Blood Forming Organs with 4 brands.

Most of the ranked brands (13 brands) are drugs dispensed mainly under the regional reimbursement programme. Involvement in the regional reimbursement programme does not exclude release of drugs under High-Cost ICD or Essential Drug Coverage schemes. That is why top brand rankings correlate by segments.

DRP price segmentation

In 2021, the average per package price under DRP increased over the year by 17.6% to come to around 1.6 thousand roubles. In terms of sub-programmes, the most expensive drugs are in the High-Cost ICD segment: the average price paid by the state per package is 15 thousand roubles (+0.4% against 2020). The regionally subsidized price grew by 19.0%, to come to 1,615 roubles. The cheapest are the drugs purchased under the Essential Drug Coverage programme: 658 roubles (+20.3%).

The structure of consumption of drugs under DRP is shown in Figure 23.

In all programmes, the most noteworthy growth in purchases is observed for drugs priced “from 10,000 to 50,000 roubles”: in the High-Cost ICD segment: +15.5%; in the Essential Drug Coverage segment: +41.1%; in the regional reimbursement segment: +25.1%.

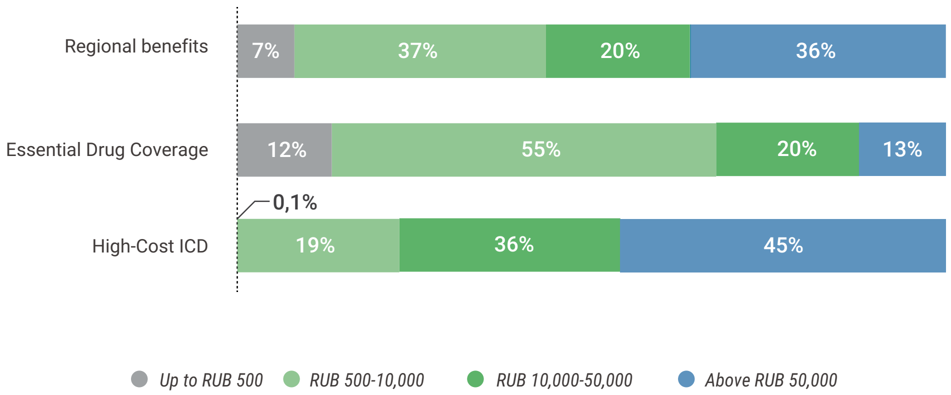


Figure 23

DRP structure in value terms, by price segment, 2021

Table 13

Top 20 brands by DRP purchase value, 2021

Ranking	Change against 2020	Brand	Manufacturer	Purchase volume, mln roubles	Share, %	Growth, % 2021/2020
1	+1	Elizaria	Generium	**9 752**	**3.8%**	**36.3%**
2	-1	Revlimid	Bristol-Myers Squibb	**8 671**	**3.4%**	**-15.6%**
3	-	Toujeo SoloStar	Sanofi	**5 785**	**2.3%**	**-15.1%**
4	+5	Xarelto	Bayer	**4 868**	**1.9%**	**54.2%**
5	+8	Advate	Baxter	**4 760**	**1.9%**	**67.7%**
6	-1	Imbruvica	Johnson & Johnson	**4 685**	**1.8%**	**18.8%**
7	-3	Spinraza	Biogen	**4 306**	**1.7%**	**-20.6%**
8	+17	Octofactor	Generium	**3 735**	**1.5%**	**122.9%**
9	-1	Acellbia	Biocad	**3 489**	**1.4%**	**8.9%**
10	-4	Levemir	Novo Nordisk	**3 370**	**1.3%**	**-5.3%**
11	+6	Xtandi	Astellas	**3 263**	**1.3%**	**52.9%**
12	+120	Ocrevus	F.Hoffmann-La Roche	**2 845**	**1.1%**	**617.0%**
13	-1	Darzalex	Johnson & Johnson	**2 543**	**1.0%**	**-14.0%**
14	+9	Linparza	AstraZeneca	**2 485**	**1.0%**	**41.3%**
15	+18	Forxiga	AstraZeneca	**2 377**	**0.9%**	**66.3%**
16	+3	Nplate	Amgen	**2 274**	**0.9%**	**16.0%**
17	+9	Galvus	Novartis	**2 103**	**0.8%**	**27.0%**
18	+9	Infibeta	Generuim	**1 968**	**0.8%**	**19.7%**
19	+5	Enbrel	Pfizer	**1 932**	**0.8%**	**14.7%**
20	+33	Jardins	Boehringer Ingelheim	**1 893**	**0.7%**	**68.8%**

Table 14

Top 20 brands by DRP purchase volumes under High-Cost ICD, Essential Drug Coverage and Regional Drug Reimbursement programs, 2021

Ranking	High-Cost ICD		Essential Drug Coverage		Regional Drug Reimbursement	
	Brand	Purchase volume, mln roubles	Brand	Purchase volume, mln roubles	Brand	Purchase volume, mln roubles
1	Revlimid	**8 212**	Toujeo SoloStar	**2 477**	Elizaria	**5 856**
2	Advate	**4 755**	Xarelto	**1 628**	Imbruvica	**4 564**
3	Elizaria	**3 893**	Levemir	**1 128**	Spinraza	**4 092**
4	Octofactor	**3 732**	Octreotide	**905**	Toujeo SoloStar	**3 309**
5	Acellbia	**3 302**	Enbrel	**803**	Xarelto	**3 240**
6	Ocrevus	**2 663**	Jardiance	**755**	Xtandi	**2 909**
7	Infibeta	**1 968**	Forxiga	**725**	Linparza	**2 473**
8	Darzalex	**1 913**	Eralfon	**688**	Levemir	**2 242**
9	Teberif	**1 701**	Ketosteril	**631**	Nplate	**2 225**
10	Priluxid	**1 639**	Humira	**578**	Galvus	**1 741**
11	Naglazym	**1 536**	Novorapid	**569**	Colistin	**1 662**
12	Ilaris	**1 342**	Tresiba	**566**	Forxiga	**1 652**
13	Advagraf	**1 321**	Apidra	**506**	Tafinlar	**1 634**
14	Vilate	**1 276**	Jaakafi	**465**	Revolade	**1 599**
15	Teriflunomide	**1 238**	Spiriva	**455**	Itulsi	**1 567**
16	Tysabri	**1 228**	Keytruda	**453**	Risarg	**1 500**
17	Cinnovex	**1 115**	Simponi	**447**	Tagrisso	**1 351**
18	Gemlibra	**1 084**	Tasigna	**433**	Jaakafi	**1 267**
19	Plegridy	**1 040**	Afinitor	**433**	Tasigna	**1 235**
20	Glatirat	**1 029**	Rosinsuline	**422**	Venclexta	**1 146**

4. Volumes of purchases of drugs for needs of HCI

In 2021, the President of Russia signed a decree concerning the national development objectives through to 2030. The objectives encompassed the conservation of the population, health and well-being. The achievement of these objectives is directly associated with the funding of the national health development programme.

In 2022–2024, over 3.6 trillion roubles from the federal budget of Russia are expected to be expended on the healthcare system. In 2022, the budgetary allocations for healthcare will amount to 1,243,465.8 million roubles, in 2023 – to 1,210,775.9 million roubles, and in 2024 – to 1,237,932.4 million roubles. Healthcare expenditures will make for around 0.9% in 2022 and 2023 and for 0.8% in 2024 of the GDP in the respective year. In 2022, expenditures on the healthcare segment in the total federal spending will account for 5.3%, against 5.8% in 2021. In 2022 and 2023, the quota of expenditures will continue decreasing, to 4.9% and to 5%, respectively. Yet, compared with the budget a year earlier, the allocated funding will grow, approximately 100 million each year.

The spread of the coronavirus infection frustrated the achievement of the performance indicators monitored in order to accomplish the tasks envisaged by the national programme.

According to the estimates, the population of Russia has declined over 2 years by almost 1.2 million people. Among the reasons for that is the excess mortality from Covid-19 as well as low birth rates. In 2020–2021, more than 660 thousand people died because of the coronavirus. All in all, 2.4 million people died in 2021. This is above the average mortality rate in 2017–2019 (1.8 million people). Mortality rates are rising amid a decline in the birth rates. In 2021, the birth rate was 1.4 million people, which is 33 thousand less than a year earlier, or 290 thousand people less than in 2017. As a result, starting as far back as 2016 Russia is confronted with a natural decline in the population. At the end of 2021, the population of Russia neared 145.5 million people.

The above figures correlate also with one of the fundamental indicators of the programme – life expectancy. In 2019, life expectancy at birth in Russia was 73.34 years, in 2020 – 71.54 years. The figure for 2021 has not yet been officially conveyed, but is forecast to come to less than 70 years – 69.7–69.8 years. Among other things, this is due to high mortality from Covid-19 among people aged 60+ (for example, almost 57% of those who died from Covid-19 in 2020 were people over 70 years old, 83% – people over 60 years old).

The target indicator featuring the accomplishment of the national objectives by 2030 is the life expectancy of 78 years. In 2020, the figure was reduced. Earlier, this life expectancy rate was supposed to be achieved in Russia by 2024, to come to 80 years in 2030. Most likely, the target figures will have to be revised because of the coronavirus infection, and life expectancy by 2030 will have to be decreased once again.

One of the initiatives to increase life expectancy is the preventive medical examination and checkup programme. The allocations for the programme increased in 2022 by 8 billion roubles. The allocations for the implementation of the "Best Medical Rehabilitation for Recovery" initiative also increased by 9.2 billion roubles, and in 2023 – by 10 billion roubles.

It must be said that the coronavirus not only has increased the load on healthcare institutions but also seriously affected the schemes of hospital operations in the last 2 years. What has changed much is the hospitalization rates, which, in their turn, affect the number of registered patients first diagnosed with diseases of basic categories (a 2.8% decline on average in 2020). In 2020, the overall incidence rates dropped by 5.3% to 156,133 people (per 100 thousand). In 2020, only the incidence of first diagnosed respiratory diseases grew against 2019 (by 3.8%). This was due to the imposition of restrictive measures in the 2nd quarter and to the fact that checkups and preventive medical examinations of the population were resumed only in July 2020. With the increasing number of people infected with Covid-19, in 2021 there are problems with planned medical care. In this context, the scope of preventive and healthcare measures can hardly be expected back at the level of 2019.

Over the last 25 years, bed capacities in the Russian public medical institutions shrank by 705.6 thousand, or by 40%. As at the end of 2020, Russian public medical institutions offered 1,031.5 thousand beds, or 7.0 beds per 1,000 people. 259.1 thousand beds, or 25.1% of the total bed capacities of the country's around-the-clock hospital facilities, were used in 2020 to treat those infected with Covid-19. Around 20% of the total infected people (about 1.4 million) needed hospital treatment in 2021. In view of the spread dynamics of Covid-19 for 2022, the project envisages free-of-charge full-time hospitalization of 705,666 coronavirus patients.

Due to the current epidemiological situation, some of hospitals and inpatient medical facilities have been repurposed, in full or in part, to treat patients with the coronavirus infection, which caused cancellations of scheduled hospitalization. In this regard, the number of patients provided with treatment and of surgeries performed in 2020–2021 is expected to be lower than in 2019. In 2020, the number of hospitalized patients who needed therapeutic treatment decreased by 28%, of hospitalized patients who needed surgery – by 24%, of neurological patients – by 30%, of patients with heart diseases – by 31%, and so forth. The smallest drop in hospitalization was observed for oncological patients (-5%), pregnant women and women in labour (-4%).

All this can trigger an explosive growth in the number of patients in the next 12 months. In the first place, it will be patients, for whom medical care was postponed in the previous periods, to be followed by those who need care to be treated for the effects of the coronavirus infection.

The required Covid-19 treatment measures have changed the structure of procurement of drugs, resulting in the increased funding of the drugs recommended for the treatment of the infection. In 2020, this re-distribution was not yet so distinct; however, in 2021, many of hospital purchases demanded this INN group. Whereas in 2018–2019 INNs put on the list did not account for more than 10 billion roubles, and for 24.4 billion roubles in 2020, in 2021 they made already for 142 billion roubles (almost 24% of the allocations for the purchase of drugs for needs of HCI).

During 2021, the government allocated extra funding for purchases of necessary drugs. In March, 3.5 billion roubles were assigned to the regions to compensate medical institutions for additional costs due to the treatment of

Covid-19; in June, around 25 billion roubles were allocated; in October, 4 billion roubles were contributed for purchases of drugs for coronavirus patients and 56 billion roubles to fight the disease; in December, another 10 billion roubles were granted.

Purchases of the coronavirus drugs increased also because Covid-19 patients outside of hospitals must be provided with necessary drugs for free. For example, out of 20 billion roubles allocated by the government on 25 January 2022 from the reserve fund for drugs for the coronavirus patients, over 5 billion roubles were assigned to the regions to provide drugs to patients who get treated at home. Most of the funds – over 15 billion roubles – will be expended on purchasing drugs that are not registered in Russia, to treat hospital patients.

In its coronavirus infection treatment guidelines, the Ministry of Health of Russia approved the following drugs for outpatient treatment: Favipiravir (+1,017.9% in roubles to 2020), Interferon alfa (-90.2%), Umifenovir (+503.8%), Remdesivir (a new INN, purchase volumes in 2021 were worth around 6 billion roubles). Preventive dosages of parenteral anticoagulants are also prescribed. Purchases in ATC [B01] Antithrombotic Agents grew more than 2.6 times in value terms.

The list of drugs recommended for hospital treatment is much broader. The highest growth rates were observed in: drugs used to treat obstructive airway disease (+5,860.1%) – Budesonide metered dose inhalation powder; antivirals for systemic use (+1,039.5%) – Remdesivir, Umifenovir, Favipiravir; immunosuppressants (+872.0%) – Anakinra, Baricitinib, Canakinumab, Levilimab, Netakimab, Olokizumab, Sarilumab, Tofacitinib, and Tocilizumab.

A noticeable increase was in the purchases of anticoagulants (Enoxaparin sodium is the principal INN in purchases), antibiotics (Levofloxacin is the principal INN in purchases), glucocorticosteroids (Dexamethasone is the principal INN in purchases), and the painkiller Paracetamol. Purchases of the immunomodulator Interferon alfa, on the contrary, decreased, as has already been mentioned above. Another medication purchased against COVID-19 in 2021 was human immunoglobulin (62.4 million roubles).

As a result of all said above, purchases of drugs for needs of healthcare institutions have been intensely growing for the last three years in a row. By the end of the year, HCI purchased 845 million packages of drugs worth 586 billion roubles in wholesale prices (the analytical data reflect payments and supplies under contracts performed in 2021). Compared with 2020, hospitals expended 47.3% more of public funds. The volume of purchased packages also increased, by 4.6%.

Let us state that purchases of drugs triggered by the spread of the coronavirus infection are the main but not the only driver for the growth of the hospital segment. Financing of the existing programmes and the appearance of new initiatives also expanded the segment.

The programme on **fighting cancer** has been in place already for many years, and allocations for purchases of appropriate drugs are growing incessantly. In 2020, 127 billion roubles were expended under the programme, in 2021, 133 billion roubles were allocated for it. The 5% increase in the financing is owing to, among other things, the appearance of more advanced drugs and changes in the treatment profiles.

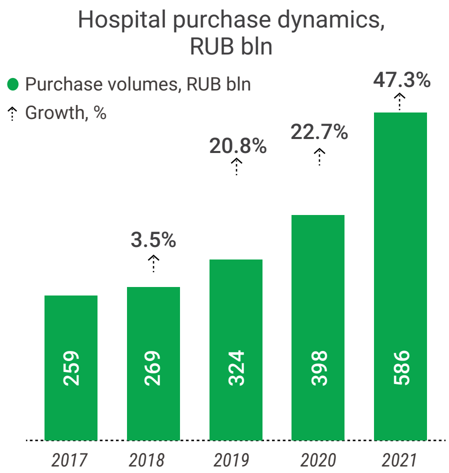
According to the data from the Ministry of Health, in 2021, there were 3.7 million oncology patients in Russia. Over 556 thousand of them were first-diagnosed patients (with the indicator back at the level of 2019). In 2021, positive trends were observed also in the other targets under the federal programme on fighting cancer. The share of malignant tumours found at stage 1–2 grew in 2021 (as at November) to 57.5%, against 56.3% in 2020. One-year mortality in oncology patients declined in 2021 to 20.5%, against 20.6% in 2020.

The most noticeable drop was in the purchases under the federal target programme on the provision of drugs to persons infected with the human immunodeficiency virus and hepatitis (-18%) and under the National Preventive Vaccination Schedule (-10%). In 2022, 22 billion roubles will be expended under the National Preventive Vaccination Schedule (NPVS) (+13% to 2021), and around 32 billion roubles – on purchasing antiretroviral drugs (more or less as in 2021).

Vaccines to prevent COVID-19 did not change the scope of the NPVS because they are purchased on a centralized basis and then are allocated by regions.

The development strategy for the immunoprophylaxis of infectious diseases through to 2035 envisages vaccination of at least 95% of the population. The strategy is also aimed at optimizing the vaccination schedule, so that is covers as many infections as possible. Measles, mumps, and rubella vaccination is already covered by the National Preventive Vaccination Schedule (NPVS); rabies, MenC, rotavirus, and chickenpox vaccination is envisaged by the Schedule of Preventive Vaccination for Epidemic Indicators. The rotavirus vaccine will be put into the NPVS in 2022, the chickenpox vaccine – in 2023, the HIV vaccine – in 2024, the MenC tetravaccine – in 2025 (as per Resolution of the Government of the Russian Federation No. 774-r dated 29 March 2021).

In 2021, over 10 billion roubles of public funds were allocated for the programme of subsidized outpatient provision of drugs for patients with cardiovascular diseases (CVD). The programme that was launched in 2020 has been extended until 2023. Earlier, the necessary drugs were to be provided to patients during a year; now, they can be provided free of charge during two years. The programme is intended to support those who have suffered from acute CVD, and those who have had coronary artery bypass surgery, coronary angioplasty and stenting, and catheter ablation. 23 drugs are provided under the programme.



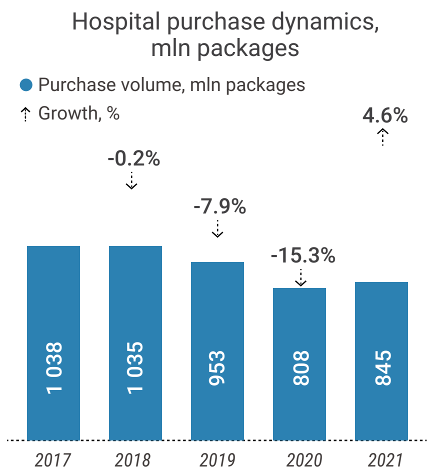


Figure 24

Hospital purchase dynamics, 2017-2021

Figure 25

Hospital purchase dynamics, by programme, bln roubles

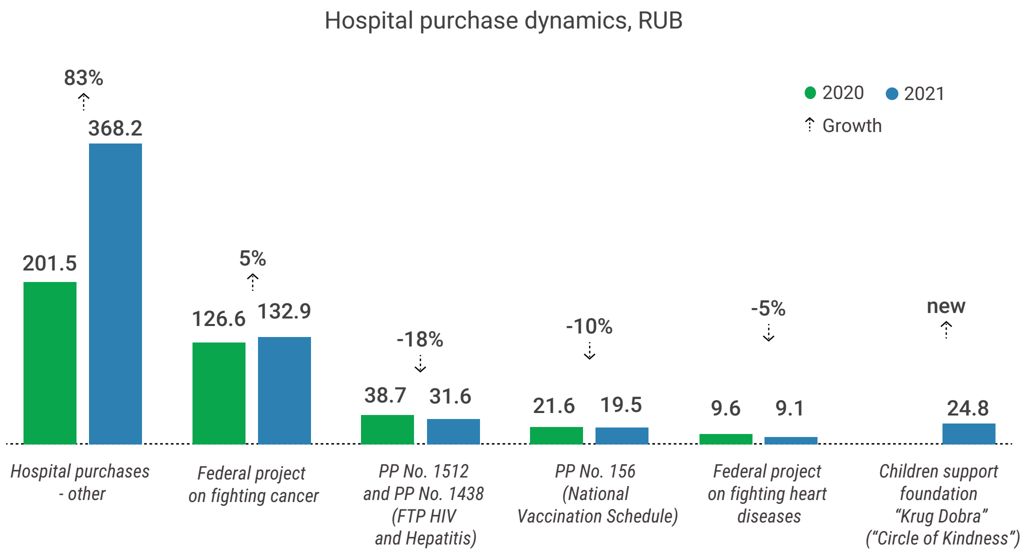
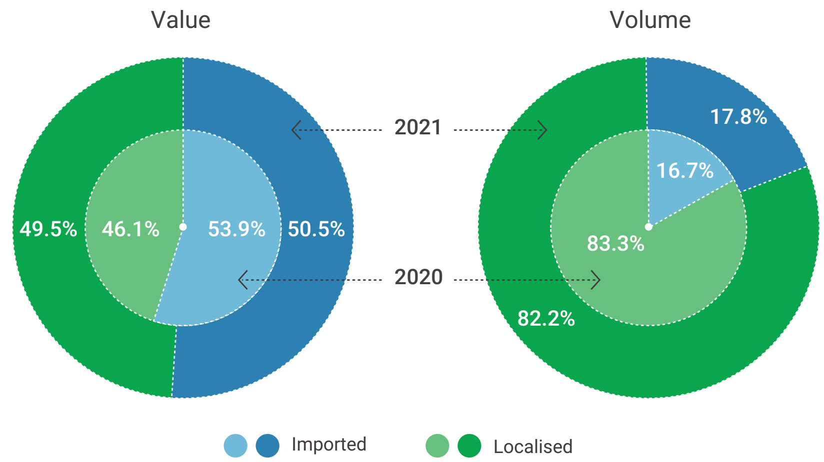


Figure 26

HCI segment structure, by origin



On 5 January 2021, the President of the Russian Federation signed a decree on the establishment of the "Krug Dobra" ("Circle of Kindness") foundation to support children with severe, life-threatening and chronical diseases, including rare (orphan) diseases. The foundation is funded by Russians whose annual income exceeds five million roubles and who pay the individual income tax increased by 2%. In 2021, around 60 billion roubles were raised. 25 billion roubles were spent on buying drugs.

Over a year of the foundation's existence, more than 2,100 children with severe and rare diseases were provided with drugs or medical care. The foundation is already supplying children with spinal muscular atrophy (SMA) with the necessary drugs, including Zolgensma, which is currently the most expensive drug in the world (purchases in 2021 were worth 1,852.2 million roubles). 1,085 children with SMA have been supported by the foundation; for 22 of them, the foundation bought Zolgensma.

Yet, the drug ranks only third by purchase volumes. Most of the money was spent on buying Spinraza (10,832.6 million roubles), second comes Evrysdi (6,300.9 million roubles).

The list of diseases, for which the foundation is offering support already today, continues expanding, and now covers 44 ICD codes. Here are the sums budgeted for the "**Krug Dobra"** (**"Circle of Kindness"**) programme: in 2022 – 78.6 billion roubles, in 2023 – 84 billion roubles, in 2024 – 89.8 billion roubles. And here are the sums that will be spent on buying drugs: in 2022 – 40.2 billion roubles, in 2023 – 43 billion roubles, in 2024 – 46 billion roubles.

The allocation of funds for high-cost programmes has changed the structure of hospital purchases.

In the reporting period, purchase volumes in the HCI segment in money shifted in favour of medications made in Russia. Over the year, the share of localized drugs grew by 3.4% in roubles, to 49.5%. What explains it is that, besides being more competitive in prices, such drugs are prioritized in tendering. Yet, in packages, advantage was gained by imported drugs: to 17.8% (a 1% increase).

Growth in the purchases of packages and in the amounts expended was observed both for localized drugs (+58.1% in roubles, and +3.3% in packages) and for imported ones (+38.0% in roubles, and +11.0% in packages).

In 2021, purchases of drugs made in Russia grew by 58.1%. High growth rates were demonstrated by interleukin inhibitor Ilsira (+4,648.3% against 2020), antiviral against the novel coronavirus infection Areplivir (+1,726.0%), and monoclonal antibodies Artlegia (+1,512.3%).

Dynamics in the sales of imported drugs (+38.0% in roubles) were driven mostly by purchases of immunosuppressant Olumiant (+749.0% against 2020), direct-acting anticoagulant Eliquis (+504.2%), and Spinraza for SMA treatment (+263.2%).

At the end of 2021, the average weighted per package price of an imported drug was 1,972 roubles, which is 24.4% more than a year earlier. The average price of localized drugs grew by 53.0%, yet, coming to 417 roubles per package it is still far behind (almost 5 times) the price of imported drugs.

The leaders among foreign producers that now are producing drugs in Russia are GlaxoSmithKline (19.3%), Pfizer (13.5%), and AstraZeneca (12.7%). Most of localized drugs are antimicrobials and drugs acting on blood and blood forming organs.

Table 15

Top 10 INNs in terms of import substitution, in value, 2021

Ranking	INN	Share of domestic drugs, roubles 2020	Share of domestic drugs, roubles 2021	Share growth, %	Top-selling drug (manufacturer), 2020	'Shift-to' drug (manufacturer), 2021
1	Remdesivir	-	92.3%	92.3%	-	Remdeform (Pharmasyntez)
2	Ritonavir	46.1%	99.99%	53.9%	Ritonavir (Lok-Beta Pharmaceuticals)	Ritonavir (Pharmasyntez)
3	Human normal immunoglobulin	22.0%	46.0%	24.0%	Privigen (CSL Behring)	Gabreglobine (Immuno-Gem)
4	Lopinavir+ Ritonavir	60.8%	82.6%	21.8%	Kalidavir (Pharmasyntez)	Lopirita (Nanopharma Development)
5	Dexamethasone	51.3%	70.5%	19.2%	Ozurdex (Allergan)	Dexamethasone (Ellara)
6	Heparin sodium	52.7%	71.1%	18.4%	Heparin (Velpharm)	Heparin (Velpharm)
7	Dalteparin sodium	9.9%	27.9%	18.1%	Framin (Pfizer)	Daltep (Pharmasyntez)
8	Meropenem	53.9%	71.0%	17.1%	Meropenem (Kraspharma)	Meropenem (Kraspharma)
9	Nadroparin calcium	0.0%	16.9%	16.9%	Fraxiparine (Aspen Pharma)	Elmaparin (Grotex) Nadroparin c alcium (Moscow Endocrine Plant)
10	Fulvestrant	0.0%	15.5%	15.5%	Faslodex (AstraZeneca)	Fazotikad (Biocad)

Figure 27

Structure of hospital purchases, by price segments, in value, 2020-2021

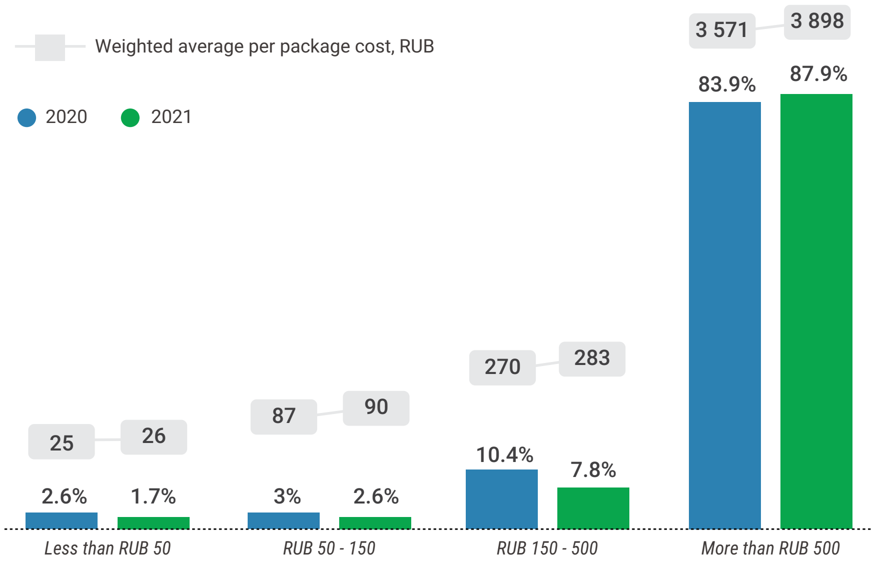
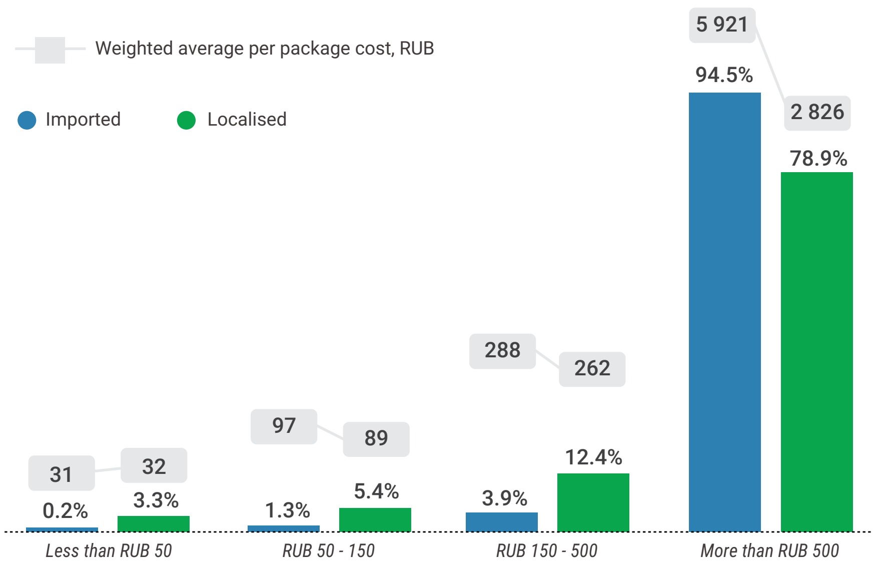


Figure 28

Structure of hospital purchases, by price segments, imported and localized drugs, in value, 2021



Though in 2021 more funds were allocated for imported drugs, the process of import substitution continues. Below are the top 10 INNs with a maximum rate of shift to domestic drugs out of the top 100 by purchase volumes (these INNs account for 70% of all hospital purchases in money).

The INNs put on the list in 2021 differed from those listed in 2020. So, each year the import substitution trends cover more and more nomenclature items. Four INNs are in the ranking by the growth of the share of domestic drugs: in the previous year, the best-seller among them was a Russian drug (highlighted), the growth was due to increased purchase volumes or to the fact that several other domestic drugs were added to the procurement list.

Purchases of the novel drug Remdesivir started in 2021; the highest purchase rates in INN were for the Russian drug Remdeform by Pharmasyntez.

Among new INNs that got into the top 100 in 2021 were: Risdiplam (F.Hoffmann-La Roche's Evrysdi) and Onasemnogene abeparvovec (Zolgensma by Novartis) for SMA treatment, and antiviral Remdesivir (Remdeform by Pharmasyntez and Veklury by Gilead Sciences).

According to the data for 2021, Russian drugs exceed 90% in 700 INNs out of 2,019 INNs purchased by hospitals. And there are 864 INNs in which imported drugs prevail (accounting for over 90% in purchases); 52 of them are in the top 100 by volume. Among the most intensive INNs represented only by imported drugs remain: Nusinersen for SMA treatment, antineoplastic Nivolumab, and direct-acting anticoagulant Rivaroxaban – these three INNs make for 5.8% of hospital purchases.

The structure of HCI purchases by price segments is shown in Figure 25.

In 2021, the price structure of hospital purchases noticeably changed. The high-price segment of "more than 500 roubles" grew by 4%. All other segments declined in the volume of purchases of drugs for HCI. The highest decline was in drugs priced from 150 to 500 roubles: over the year, their share shrank from 10.4% to 7.8%. So, priority was given to more expensive drugs.

In packages, as before the largest segment is that of drugs priced of up to 50 roubles: it accounts for 45.2%. In 2021, the share of this price segment significantly decreased – by 7% compared with 2020. As before, among the most purchased are INN-Sodium chloride drugs (34.8% of the physical volumes of drugs "priced below 50 roubles"). The structure in packages changed in favour of the "150–500 roubles" segment (+2.7%) due to the increased purchases of Dexamethasone; in favour of the "above 500 roubles" segment (+4.1%) – owing to Areplivir.

The highest share among imported drugs is held by drugs priced over 500 roubles: 94.5% (Figure 26). Among localized drugs, the share of the price segments «less than 50 roubles» (3.3%), «50–150 roubles» (5.4%) and «150–500 roubles» (12.4%) is insignificant; the highest rate of sales accounting for 78.9% was also in the segment «over 500 roubles".

In the segments where the price per package is up to 500 roubles the difference between the weighted average price for imported and for domestic drugs is not so perceptible whereas in the largest segment of drugs "priced over 500 roubles" the difference between Russian and foreign drugs is still fairly marked: nearly 2 times.

The ratio of hospital purchases in Russia at the end of 2021, by ATC codes, 1st level, is shown in Table 16.

Table 16

Hospital purchases structure, by ATC code, 2021

ATC code 1st level	Value, bln roubles	Share in value terms, %	Volume, mln packages	Share in volume terms, %
Antineoplastic and immunomodulating agents [L]	**205.7**	**35.1%**	**30.5**	**3.6%**
Antiinfectives for systemic use [J]	**167.0**	**28.5%**	**269.9**	**31.9%**
Blood and blood forming organs [B]	**88.7**	**15.1%**	**228.5**	**27.0%**
Nervous system [N]	**28.6**	**4.9%**	**18.0**	**2.1%**
Various [V]	**19.5**	**3.3%**	**76.1**	**9.0%**
Alimentary tract and metabolism [A]	**18.2**	**3.1%**	**14.7**	**1.7%**
Musculoskeletal system [M]	**17.3**	**2.9%**	**56.7**	**6.7%**
Cardiovascular system [C]	**8.5**	**1.4%**	**23.8**	**2.8%**
Respiratory system [R]	**6.8**	**1.2%**	**40.1**	**4.8%**
Non-ATC	**6.8**	**1.2%**	**25.6**	**3.0%**
Sensory organs [S]	**6.5**	**1.1%**	**0.7**	**0.1%**
Systemic hormonal preparations, excluding sex hormones [H]	**6.0**	**1.0%**	**4.5**	**0.5%**
Dermatologicals [D]	**3.5**	**0.6%**	**52.1**	**6.2%**
Genitourinary system and sex hormones [G]	**2.8**	**0.5%**	**3.2**	**0.4%**
Antiparasitic products, insecticides and repellents [P]	**0.3**	**0.0%**	**0.7**	**0.1%**

The ranking of drugs in the HCI segment by ATC codes is much different from that on the commercial market. The TOP 2021 ranking differs from the ranking of the last year. Once again, the reason for that is the increased purchases of drugs for the treatment of neuromuscular diseases: spinal muscular atrophy and Duchene muscular dystrophy (ATC code [M] moved up 3 position lines); surfactants to prevent and treat the neonatal respiratory distress syndrome ([R] moved up to rank 1st); glucocorticosteroid Dexamethasone used in the treatment of patients with moderate and severe COVID-19 and viral pneumonia ([H] moved up 2 position lines).

In the last 2 years, [L] Antineoplastic and Immunomodulating Agents are on top in the hospital purchases segment of 2021 (a 35.1% share by value), thus demonstrating a noticeable increase in purchases by 40.4% (purchases of drugs in this category grow every year since 2013). The growth in sales in [L] was mainly due to the increased purchases in Sub-group [L04] Immunosuppressants (+475.6% in roubles), more specifically, of the Russian drugs – Biocad's interleukin inhibitor Ilsira (+4,648.3%) and R-Pharm's monoclonal antibodies Artlegia (+1,512.3%). Also in volume terms, antineoplastic and immunomodulating agents demonstrated a noticeable increase: +63.6%

[J] Antiinfectives for systemic use rank second. In 2021, the volume of this group grew by 29.3%, which is, though, almost twice as little compared with the overall growth in hospital purchases. The increase was due to the increased sales of antivirals [J015] (+89.3%) and antibiotics [J01] (+62.0%). Among antivirals, the most demanded brands were: Areplivir (+1,726.0%) and Coronavir (+688.1%); other two brands, Remdeform and Favibirin appeared in 2021. These 4 drugs are intended to treat the novel coronavirus infection. In the antibacterials sub-group, purchases grew for INNs such as Cefepime+Sulbactam (+148.7%), Levofloxacin (+113.6%), and Ceftriaxone (+111.8%). These antimicrobials are used to treat complicated forms of COVID-19.

[B] Blood and Blood Forming Organs (+102.2%) ranked 3rd by the volume of hospital purchases. The largest in 2021 became [B01] Antithrombotic Agents, which accounted for 68% of the group's sales in roubles. The best sellers are the drugs on the basis of INN Enoxaparin sodium (Enixum, Enoxaparin, and Clexane). Antithrombotic agents reduce the risks of thromboembolic complications, which are rather high in COVID-19 patients. 82.4% of volumes fall within [B05] Blood substitutes and perfusion solutions, with the leading INN Sodium chloride.

Drugs used in the treatment of musculoskeletal disorders (+241.0% in roubles) demonstrated the maximum growth in purchases thanks to the increased spending of medical institutions on high-cost drugs to treat SMA and DMD.

The most urgent concern in today's medicine are cardiovascular diseases (CVD) as heart and vascular diseases are the leading cause of death. In 2021, purchases of [C] drugs dropped by 7.3% in roubles against 2020.

Table 17 shows the ranking of the top 20 producers in the HCI segment at the end of 2021; it is much different compared with the previous year, both in terms of producers as well as in terms of their positions. The top 3 producers are companies with a high proportion of drugs for the treatment of oncological diseases.

Among the leaders are two Russian companies. Owing to the increase in purchases by

Table 17

Top 20 producers in the HCI segment by value, 2021

Ranking	Change	Manufacturer	Value, mln roubles	Share, %	Growth, % 2021/2020
1	+2	Biocad	**35 233**	**6.0%**	**51.9%**
2	+25	Р-Фарм	**32 579**	**5.6%**	**867.4%**
3	-1	F.Hoffmann-La Roche	**29 401**	**5.0%**	**18.5%**
4	+2	Pharmasyntez	**25 781**	**4.4%**	**58.0%**
5	-4	Merck	**21 755**	**3.7%**	**-18.6%**
6	+1	Pfizer	**20 842**	**3.6%**	**54.3%**
7	-2	Bristol-Myers Squibb	**19 805**	**3.4%**	**2.1%**
8	+3	Bayer	**19 598**	**3.3%**	**96.9%**
9	-5	Sanofi	**16 834**	**2.9%**	**-24.9%**
10	-	AstraZeneca	**14 851**	**2.5%**	**39.3%**
11	-2	GlaxoSmithKline	**13 917**	**2.4%**	**25.9%**
12	+2	Novartis	**13 440**	**2.3%**	**79.2%**
13	+13	Biogen	**12 700**	**2.2%**	**263.2%**
14	-2	Johnson & Johnson	**12 346**	**2.1%**	**27.2%**
15	+22	Promomed Rus	**12 062**	**2.1%**	**405.4%**
16	+20	Eli Lilly	**9 634**	**1.6%**	**272.6%**
17	+4	Protek	**8 203**	**1.4%**	**107.1%**
18	-5	Abbott	**8 108**	**1.4%**	**2.2%**
19	-2	Binnopharm Group	**7 830**	**1.3%**	**39.2%**
20	+20	Velpharm	**7 567**	**1.3%**	**323.7%**

Note:
«producer» means the parent company that may incorporate several production sites.

51.9%, Biocad moved up to rank 1st (+2 position lines). All in all, HCI purchased 40 brands that substitute for foreign-made equivalents under the import substitution programme. The highest growth in the hospital expenditures was for antineoplastic Ilsira (+4,648.3%), Forteca (+1,080.3%), and Efleira (+966.6%). 3 more brands appeared in the company's portfolio compared with 2020.

Public funds spent in 2021 on purchases of Russian R-Pharm's drugs totalled 32.6 billion roubles, which is by 867.4% more than a year earlier. As a result, the Russian producer moved up 25 position lines. The major contribution to the growth was from ATC [L] drugs: Abiraterone-TL (+10,597.6%), Artlegia (+1,512.3%), and Pazopanib-TL (+951.7%). The company supplies 37 drug brands to hospitals.

The year-end third is F.Hoffmann-La Roche (+18.5%). The company's hospital portfolio includes 42 brands. F.Hoffmann-La Roche's best-seller is Evrysdi for the treatment of spinal muscular atrophy (SMA) in adults and children 2 months of age and older. Other 10 key brands belong to [L]. All in all, 11 basic drugs account for around 98% of the volumes purchased from the Swiss corporation.

There are 7 domestic producers in the top 20 by value of hospital purchases. All Russian companies demonstrated distinctly positive dynamics: R-Pharm (+867.4% in roubles, and +25 position lines), Promomed Rus (+405.4%, and + 22 position lines), Velpharm (+323.7%, and +20 position lines), Protek (+107.1%, and +4 position lines), Pharmasyntez (+58.0%, and + 2 position lines), Biocad (+51.9%, and +2 position lines), and Binnopharm Group (+39.2%, and -2 position lines).

Promomed Rus supplies over 100 brands to hospitals, 92% of sales in value are antivirals and antibiotics. In 2021, HCI purchased Areplivir, the producer's major drug to treat COVID-19, for around 9.1 billion roubles (+1,726.0% against 2020).

Among Velpharm's major drugs, a noticeable increase in the purchase volumes was observed for nootropic agent Citicoline (+957.0%), azalide antibiotic Azithromycin (+784.9%), and direct-acting anticoagulant Heparin (+492.1%). In 2021, the company's hospital portfolio offered, all in all, 77 brands.

Purchase volumes declined as compared with 2020 only with two producers from the ranking - Sanofi (-24.9%; – 5 position lines) and Merck (-18.6%; – 4 position lines).

Table 18 shows the top 20 brands in the HCI segment at the end of 2021. The top 20 brands account for 29.4% of hospital purchases, which is 4% less than in the previous year.

There are drastic changes in the ranking: in 2021, none of the top 20 drugs retained their 2020 positions. R-Pharm's Artlegia (+1,512.3%) ranks first (+53 position lines over the year). Monoclonal antibodies are among the latest achievements in pharmacology, they are a new class of targeted action drugs. Artlegia, a solution for subcutaneous injection, is purchased by HCI for patients with rheumatoid arthritis with moderate or high disease activity.

Another immunosuppressant by Biocad, Ilsira, moved up from the 229th position to rank 2nd (+4,648.3%): the drug is used in the treatment of rheumatoid arthritis and in the pathogenic therapy for the cytokine release syndrome in case of severe forms of the novel coronavirus infection.

Table 18

Top 20 brands in the HCI segment by value, 2021

Ranking	Change	Brand	Value, mln roubles	Share, %	Growth, % 2021/2020
1	+53	Artlegia	**21 598**	**3.7%**	**1 512.3%**
2	+227	Ilsira	**14 936**	**2.5%**	**4 648.3%**
3	+13	Spinraza	**12 700**	**2.2%**	**263.2%**
4	-2	Opdivo	**12 024**	**2.1%**	**-9.9%**
5	+26	Heparin	**10 497**	**1.8%**	**380.8%**
6	+55	Coronavir	**9 700**	**1.7%**	**688.1%**
7	+145	Areplivir	**9 138**	**1.6%**	**1 726.0%**
8	+19	Xarelto	**9 031**	**1.5%**	**271.4%**
9	+1	Sodium Chloride	**8 160**	**1.4%**	**34.9%**
10	-7	Keytruda	**7 426**	**1.3%**	**-40.5%**
11	+1	Tivicay	**6 733**	**1.1%**	**18.9%**
12	new	Evrysdi	**6 301**	**1.1%**	**new**
13	+13	Actemra	**6 134**	**1.0%**	**145.3%**
14	-7	Ultrix	**5 917**	**1.0%**	**-10.2%**
15	+36	Enixum	**5 500**	**0.9%**	**288.3%**
16	-11	Avegra	**5 436**	**0.9%**	**-40.5%**
17	+66	Eliquis	**5 422**	**0.9%**	**504.2%**
18	new	Remdeform	**5 420**	**0.9%**	**new**
19	+90	Olumiant	**5 388**	**0.9%**	**749.0%**
20	+4	Fraxiparine	**4 799**	**0.8%**	**90.2%**

Spinraza (INN-Nusinersen) by Biogen moved over the year 13 position lines upwards to rank third among the brands, having increased its purchase volumes by 263.2%. The solution for intrathecal administration is used to treat SMA. The drug is intended to be used permanently and for a long term.

Two new drugs, which were not purchased in the previous year, got into the top 20: Evrysdi (ranking 12th) to treat spinal muscular atrophy, and Remdeform (ranking 18th) to treat COVID-19 in adults with pneumonia requiring supplemental oxygen.

The ranked drugs are composed of: anticoagulants – 5 brands; immunosuppressants used in the treatment of rheumatoid arthritis – 4 brands; antivirals against COVID-19 – 3 brands; antineoplastic agents – 3 brands; drugs to treat SMA – 2 brands; flu vaccines – 1 brand; HIV antivirals – 1 brand.

Besides high-cost imported drugs, the top twenty include also a Russian low-cost rehydrating and solvent agent Sodium Chloride (+34.9%). In packages, Sodium Chloride is the all-time leader accounting for 17% of all purchases in the hospital segment. 38 producers are marketing drugs under this brand. The leaders in 2021 were Russian companies Medpolymer, Escom, and Pharmasyntez.

5. Dietary Supplements

The Covid-19 pandemic has demonstrated how important and valuable is a strong immune system and has encouraged many people to reconsider their mode of life, eating habits and the attitude to their own body. One of the ways to boost the immune system is to take vitamin and mineral complexes, which account for a large share of the dietary supplements segment. That is why, this product category has maintained high sales dynamics over the last years.

Dietary supplements (DS) make part of the pharmacy product mix but can be found also at other points of sale. Until 1 January 2021, DS could be sold only at stationary points of sale: pharmacies, department stores, specialized stores and outlets. This year, this restriction has been lifted (SanPiN (Sanitary Rules and Regulations) 2.3.2.1290-03 are no longer in force), and now these products can be sold by any trade company, including via the Internet. The main requirement is the state registration of such products and appropriate quality and safety certificates. Currently, there are no other regulatory documents to set requirements to the manufacture and trade of dietary food supplements.

In this context, it is just to be expected that one of the legislative initiatives awaiting DS manufacturers in 2022 will be DS labelling, intended, among other things, to fight against counterfeits. Arrangements for the mandatory labelling of drugs for the monitoring of pharmacy sales will be naturally followed by the integration of a similar system to control movements of dietary supplements. The integration process was supposed to be in full swing back in the spring of 2021, but then the drug labelling system was not yet running smoothly and the launch of DS labelling was postponed until 2022.

The DS labelling pilot project is envisaged by Government Order No. 673 dated 29 April 2021. The order sets forth the project purposes and objectives, implementation steps, and a list of products subject to labelling. The pilot project on the labelling of dietary food supplements started on 1 May 2021 and is supposed to continue until 31 August 2022. The effective date for the mandatory labelling will be set after the pilot project is completed.

As is reported by CRPT, as of January 2022, 81 manufacturers and 70 importers are involved in the DS labelling pilot project (around 14% of all companies selling their products on the pharmacy market for DS). At the same time, even if a company is already registered in the Chestny Znak system, it does not mean that all of its products are subject to labelling. For example, Evalar, the largest Russian DS manufacturer, chose only two names of its products in pill form. The first batches of the labelled products are expected in February-March 2022. Discussion is in progress to add also other forms of products to the list of those subject to labelling, such as: effervescent tubes, doypacks, decartoned jars, and others.

The number of DS manufacturers is comparable with the number of drug producers (around

1,100). But there are only about 220 manufacturers that produce both drugs and DS. It means that most manufacturers will have to get ready for labelling from scratch.

Speaking once again about points of sale of dietary supplements, the market is expected to be driven in the nearest future by marketplaces and online stores. After the legalization of home delivery of over-the-counter drugs, online purchases of DS are spreading more widely. Pharmacy online sites are promoting DS products that are traditionally sold in pharmacies whereas other media are offered by a great number of manufacturers that do not work with pharmacies, and they will also have to be involved in the labelling process.

At the end of 2021, DS ordered via pharmacy online sites accounted for more than 12% of the total capacity of the pharmacy market for DS, approximately another 6% belong to marketplaces such as Ozon, Wildberries, and Yandex.Market, where one can find DS brands that cannot be found in pharmacies (for example, Optimum Nutrition, Maxler, BeLight, which, being the best-sellers on the marketplaces, cannot be found in pharmacies). The Internet will remain a major sales channel. Dietary supplements are classified as over-the-counter drugs and their delivery is not restricted, that is why many pharmaceutical integrators continue intensively promoting them.

One more measure to control Internet sales of DS can become another legislative initiative that is being much debated in the government. We are referring to two draft laws proposed to the State Duma for the out-of-court blocking of websites selling food products that failed conformity assessment and are not authorized for use. Together with the Ministry of Industry and Trade, it is proposed to legalize blocking not an entire website but its individual pages; on the proposal of the Ministry for Digital Technology, Communications and Mass Media, the draft law is not supposed to apply to social networks. Another way to avoid blocking is to remove product data within 48 hours. If the proposed draft laws are passed, they will be formalized to govern DS distance selling.

One of the websites among the first to be affected by the law is iHerb, a well-known American site. The company has more than once been in litigation. In the recent years, the website has been periodically ordered to be blocked for publishing information prohibited in Russia.

Finally, the American marketplace announced being willing to register its products in Russia in order to confirm their conformity to the sanitary and health regulations in force in the Russian Federation, And it is not only about DS but also about cosmetic products. Earlier, iHerb announced its intention to localize in Russia the production of dietary supplements. The company's experts are currently analyzing data to select a pilot region.

For the pharmacy retail segment, iHerb is also a medium for finding products to expand the product mix released under a chain's own brand. Exclusive brands are monitored through foreign Internet channels, and then high-demand products may appear in some pharmacy chain and be offered only by that chain (the so-called conditional brand). Dietary supplements are one of the popular categories for the appearance of own brands. Own brands account already for nearly 9% of pharmacy sales of DS in packages, and for nearly 5% in roubles.

Own brands are the category that helps pharmacies to boost profits. Generally, the markup on DS is higher than the markup on drugs, yet, seeking to maintain competitive prices and to attract customers, pharmacies have to lower the markup on this product group: in 2021, the markup on DS was about 33%, which is 9% lower than in 2015. Of note, the markup was getting down for 5 years, and 2021 was the first year when it grew a little bit, approximately by 1%. At the same time, the markup on dietary supplements promoted as own brands is significantly higher – at the end of 2021, it was 60%. So, the margin on the product groups in the segment of own brands is twice as high as on ordinary DS.

Shifts in the demand, the popularity of DS amid the spread of the pandemic of the coronavirus infection, the continuing expansion of own branded product groups, and the increasing popularity of online sites – all this made the DS category the fastest growing category among all pharmacy product groups. At the end of 2021, the commercial market for dietary supplements was worth 85.6 billion roubles (+11.3% against 2020), or 341 million packages (+0.9%). For the last three years, in terms of packages the market has remained on more or less the same level: the growth rate is around 1-2% a year. In 2021, the peak was observed in the 4th quarter that made for around 30% of the annual turnover in roubles. The highest growth against 2020 was in April (+22.5% in roubles to the 4th month of the previous year) and in June (+19.5% to June 2020).

Customers switched to more expensive supplements and the prices grew. It had a significant impact on the sales structure by price categories. A considerable sales growth was witnessed by the high-price segment (+22.4% in roubles, +23.8% in packages). As a result, the DS market structure in terms of the price categories changed giving predominance to supplements priced over 500 roubles, the share of this supplement group grew by 5.0% in value and by 2.9% in volume. As a result, high-cost food supplements brought in more than half the revenues for pharmacies (a 55.5% share in roubles), compared with only 35.5% in 2017. Demand is not conditioned on prices, it is the customer profile that is changing and the DS market is growing thanks to well-off people who value a healthy lifestyle.

Second in size on the market in value terms come supplements at «RUB 300–500» (20.5%).

Figure 29

Own brands in pharmacy sales of DS

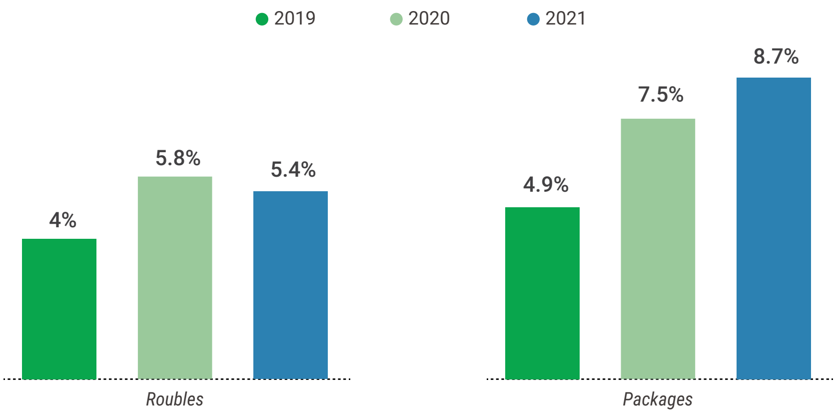


Figure 30

Dynamics of DS Pharmacy Sales in Russia

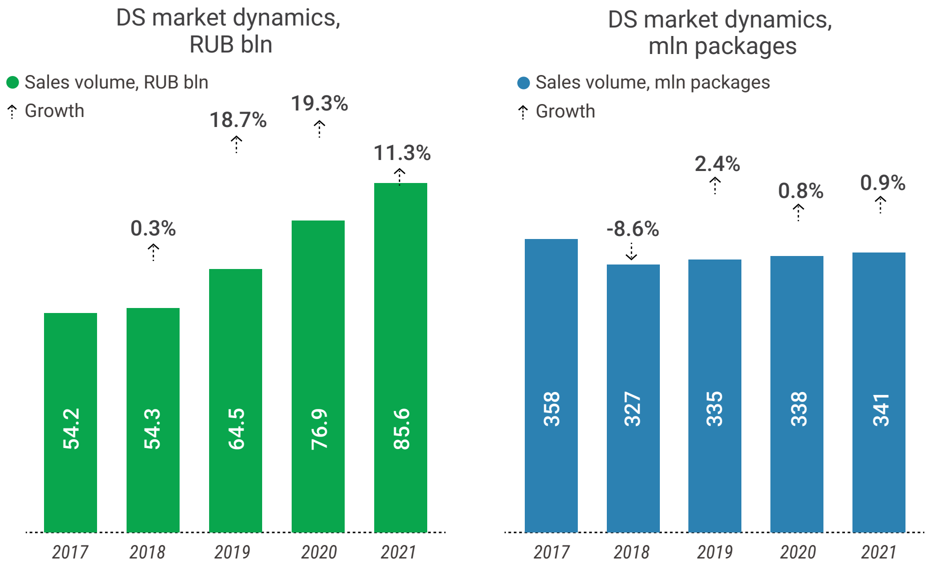


Figure 31

DS Sales Structure by Price Segments in 2021

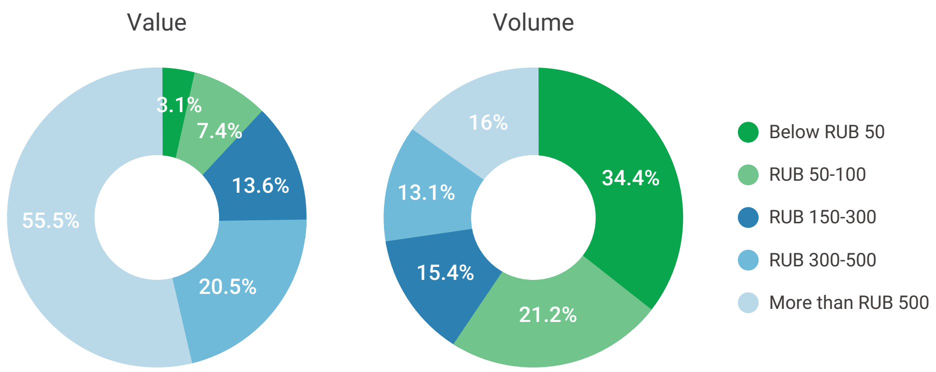


Table 19

Sales rating according to the DS classifier chapters in 2021

Ranking	Change	Group	Value, mln roubles	Share, %	Growth, % 2021/2020
1	-	DS affecting the whole body [V]	**28 361.4**	**33.1%**	**14.0%**
2	-	DS affecting the digestive system [A]	**17 102.3**	**20.0%**	**13.2%**
3	-	DS affecting the central nervous system function [N]	**7 790.7**	**9.1%**	**5.9%**
4	-	DS affecting the reproductive system [G]	**6 458.7**	**7.5%**	**6.9%**
5	-	DS used for treatment of skeletal system conditions [M]	**6 253.3**	**7.3%**	**11.0%**
6	-	DS supporting cardiovascular system functions [C]	**3 911.3**	**4.6%**	**9.3%**
7	-	DS for treatment of respiratory organs conditions [R]	**3 037.6**	**3.6%**	**14.3%**
8	-	DS for treatment of various skin and hair conditions [D]	**2 733.3**	**3.2%**	**25.1%**
9	+2	Slimming and cleansing DS [W]	**1 835.4**	**2.1%**	**23.2%**
10	-1	DS affecting sensory organs [S]	**1 821.3**	**2.1%**	**-13.4%**
11	-1	DS affecting hematopoietic system [B]	**1 738.2**	**2.0%**	**9.1%**
12	-	DS supporting the immune system function [I]	**1 579.3**	**1.8%**	**7.4%**
13	+1	DS used in case of poisoning and intoxication [T]	**999.6**	**1.2%**	**17.2%**
14	-1	DS affecting the urinary system [U]	**951.4**	**1.1%**	**-2.1%**
15	-	DS affecting the endocrine glands function [H]	**784.9**	**0.9%**	**-1.4%**
16	-	DS used to treat conditions caused by bacteria, viruses and fungi [J]	**135.2**	**0.2%**	**19.6%**
17	-	DS used for treatment and prevention of oncology conditions (except reproductive system tumors) [O]	**66.3**	**0.1%**	**-12.2%**

Cheap supplements are still the most highly demanded by Russian customers, despite a drop in their sales by 7.9% in roubles and by 8.2% in packages. In consequence, items «below RUB 50» are being gradually pushed off from shelves: in 2021, their share shrank by 3.4% to 34.4% of sold packages. Due to the low value in roubles, the lower segment hardly goes beyond 3% (-0.6% in comparison with 2020). Hematogen and Ascorbic Acid brands account for more than 40% of the sales in packages in the «below 50 roubles» segment.

The changes in prices for dietary supplements have been analyzed by using the Laspeyres price index. One of the reasons for the rise in the weighted average prices was the DS inflation rate. In 2021, DS prices in roubles grew by 5.0%, which is still lower than in 2020.

DS are marketed by manufacturers as nutritional supplements helping to prevent various diseases. The DS classifier by effect (developed by DSM) contains 17 chapters, most of which have the 2nd sub-level, and some – the 3rd.

Over the year, the ranking somewhat changed:

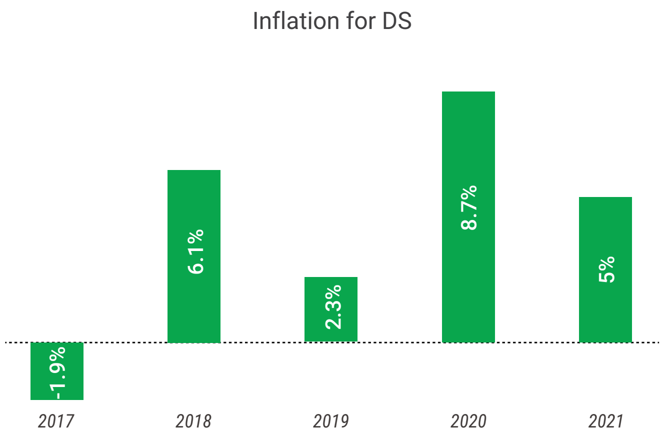
- B] DS affecting hematopoietic system (+23.2%) significantly strengthened its ranking position, by moving two position lines upwards owing to the growth in sales.
- Supplements affecting the urinary system (+17.2%) and dietary supplements used in case of poisoning and intoxication (-2.1%) switched their positions due to varying trends.

Multi-purpose supplements of group [V] «DS affecting the whole body» (a 33.1% share in roubles) are traditionally the most in-demand on the market. Compared with 2020, sales in this DS group grew by 14.0%. The main DS brands in group [V] are: Solgar Vitamin and Herb's Solgar (13.8% in the group's sales in roubles), and Evalar (6.9%) from the same-name company.

As before, ranking second is [A] DS affecting the digestive system (20.0%), its sales grew by 13.2%. The most popular products in this group are Russian Binnopharm Group's Maxilac (14.0% in the group's sales in roubles), and PharmaMed's Bac-Set (12.2%).

Figure 32

Change in DS prices on the Russian pharmacy market



The third-ranking is [N] DS affecting the central nervous system function (9.1%), also with positive sales dynamics: +5.9% The group is headed by Russian Evalar's supplements – Evalar Glycine (11.2% in the group's sales) and The Calming Formula (10.3%).

13 groups demonstrated positive dynamics. The maximum growth rates were observed for:

- supplements used to resolve various problems with the skin and hair (+25.1%): the positive dynamics in [D] were thanks to Zincorol (+118.4%), Anti-Age (+97.1%), and Perfectil (+54.8%);
- DS affecting hematopoietic system (+23.2%): sales of [B] brands such as Folic Acid and Vitamir grew by 272.6% and 115.4%, respectively;
- DS used to treat conditions caused by bacteria, viruses and fungi (+19.6%) rank third by the annual growth rates: the group's sales grew mostly thanks to 9-ka STOPrazit (+89.7%) and Now Foods (+80.1%).

The heaviest drop in sales, by 13.4%, was observed in [W] – DS for slimming and cleansing, which used to be highly demanded. Sales of the weight-loss supplements such as Modelform, Reduxin Light and Turboslim product lines dropped in 2021 by 37.3%, 22.2% and 17.0%, respectively.

TOP 20 DS brands leading in sales volumes on the Russian market

At the end of 2021, pharmacies offered 3,040 DS brands (around 11,127 SKUs) from 1,054 manufacturers. More than 330 new brands emerged on the market over the year. Earlier, it was easy for novelties to get to the top in rankings thanks to their adequate promotion; now, it is more difficult to launch «attractive» products.

The most successful "novelty" was Bayer's Teraflex: at the end of the year, it ranked 247th (sales volume: 60.7 million roubles). The product sold as a drug in various dosage forms is well known to the customer. In 2021, pharmacies started offering also a Teraflex Plus food

Figure 33

DS sales dynamics by classifier chapters, roubles

Table 20

TOP-20 DS brands in Russia in 2021

Ranking	Change	Brand	Value, mln roubles	Share, %	Growth, % 2021/2020
1	-	Solgar	**6 123.1**	**7.2%**	**1.6%**
2	+3	Evalar	**3 113.0**	**3.6%**	**87.2%**
3	+4	Maxilac	**2 389.8**	**2.8%**	**47.8%**
4	-2	Doppelherz	**2 336.5**	**2.7%**	**12.7%**
5	+4	Bac-Set	**2 097.2**	**2.5%**	**38.6%**
6	-	Detrimax	**1 925.8**	**2.3%**	**18.0%**
7	-4	Fitolax	**1 883.5**	**2.2%**	**-3.1%**
8	-4	Femibion	**1 851.5**	**2.2%**	**10.3%**
9	+1	Anti-Age	**1 771.7**	**2.1%**	**60.6%**
10	-2	Vitrum	**1 443.8**	**1.7%**	**-4.6%**
11	+3	Vitamishki	**954.8**	**1.1%**	**1.7%**
12	+6	VTF	**913.6**	**1.1%**	**20.5%**
13	-	Supradyn	**889.7**	**1.0%**	**-10.5%**
14	-3	Turboslim	**877.0**	**1.0%**	**-17.0%**
15	+2	Evalar Glycine	**872.0**	**1.0%**	**-1.1%**
16	-4	Natures Bounty	**842.0**	**1.0%**	**-17.1%**
17	+11	Bud' Zdorov!	**804.6**	**0.9%**	**71.5%**
18	-3	Formula Spokoistviya	**800.8**	**0.9%**	**-11.1%**
19	+10	Elevit	**771.7**	**0.9%**	**80.6%**
20	+4	Vitamir	**757.1**	**0.9%**	**30.5%**

supplement that contains glucozamin and chondroitin sulphate enriched with B group vitamins. This combination is good for the regeneration of the spine and surrounding tissues in conditions causing back pain.

Several significant changes can be seen in the ranking of the top 20 brands leading by sales value. Also the positions of the top three brands changed. Except for the leader – Solgar Vitamin and Herb's Solgar dietary supplements (7.2% in roubles) affecting the whole body and its individual systems. The second-ranking are Evalar dietary supplements from the same-name manufacturer (3.6%), with a variety of products. The third-ranking is synbiotic Maxilac (2.8%) that helps to maintain the balance of the gastrointestinal microflora. This supplement is made by Russian Binnopharm Group.

There are three novelties in the ranking. Own-branded Bud' Zdorov! products made for pharmacies by 8 companies. Having increased its sales by 71.5%, the brand moved up by 11 position lines to rank 17th. Sales of another novelty, Bayer's Elevit vitamin and mineral complex for pregnant and nursing women (+10 position lines) grew by 80.6%. Russian Kvadrat-C's Vitamir moved up from the 24th to the 20th position, having increased its sales of vitamin complexes over the year by 30.5%.

The most prominent growth was with Evalar (+87.2%; +3 position lines), the brand demonstrated the highest growth rates in the top twenty. The brand offers a variety of products: its positive dynamics were thanks to the immunity maintenance and enhancement supplements – Evalar Zinc (+1,601.1%), Evalar Zinc+D3+C+Quercetine (+1,185.7%), and Evalar

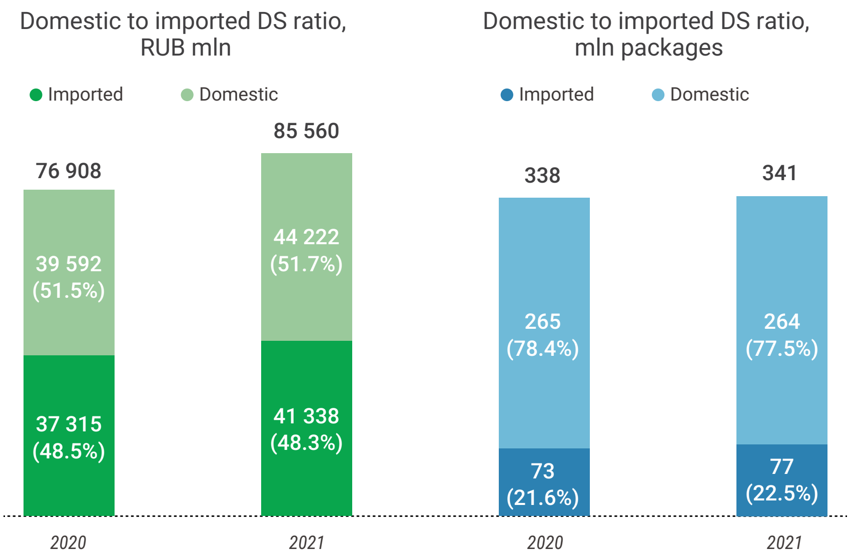


Figure 34

Structure of domestic and imported DS sales volumes

Zinc+Vitamin C (+151.6%). Among those that performed not so well, let us mention Natures Bounty, with a 17.1% drop.

It is of note that during the spread of the coronavirus infection vitamin complexes, especially, immune enhancement ones, gained much popularity. That is why products of this category grow faster than the market on the whole.

As before, Evalar holds most positions in the ranking of the brands – six out of twenty, accounting for 10.9% (+1.1% against 2020).

The DS market is dominated by products manufactured in Russia. Russian DS account for 77.5% of sales in volume and for 51.7% in value. In roubles, the market structure changed in favour of Russian dietary supplements (their market share grew by 0.2%), whereas in packages, on the contrary, the share of imported DS rose over the year from 21.6% to 22.5%.

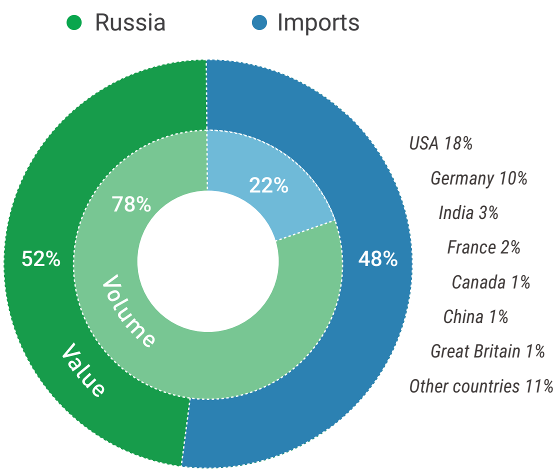
In absolute terms, both categories grew in sales in value: sales of imported supplements grew in 2021 against 2020 by 10.8%, sales of Russian supplements – by 11.7%. In packages, sales of Russian dietary supplements dropped by 0.2%, sales of imported supplements grew by 4.9%.

In 2021, the average per package price of a Russian DS was 167 roubles (+11.9% against 2010), which is something like 3 times lower than the per package price of an imported supplement – 540 roubles (+5.6%).

The leaders among foreign DS manufacturers are USA (37.7%), Germany (20.5%) and India

Figure 35

Structure of domestic and imported DS sales volumes. by countries in 2021



(6.3%). The most popular American DS are Solgar supplements, by Solgar Vitamin and Herb. The leaders among German manufacturers are Stada (Vitrum and Artra brands) and Queisser Pharma (Doppelherz DS line). The top-ranking among Indian manufacturers are Dr.Reddy's (Femibion) and Sun Pharmaceutical (Neotravisil).

TOP 20 DS manufacturers, leading in sales volumes on the Russian market

DS manufacturers' concentration on the pharmacy market is quite high – the TOP 20 companies hold 62.1% of the market.

For many years, Evalar, a Russian company, has remained the market leader (16.2% in roubles). In 2021, it saw a sales volume increase by 16.1%. The growth in the manufacturer's sales was thanks to the Evalar supplement (+87.2%) that covers a wide range of products, and the Anti-Age DS line (+60.6%) for rejuvenation inside out. Sales of Evalar Bio herbal teas and Turboslim weight loss supplements dropped, on the contrary, by 19.8% and 17.0%, respectively. Today, Evalar's portfolio comprises 380 various DS product names, grouped in 93 one-brand product lines. Each year, the company launches new products on the market. In 2021, Evalar continued re-arranging its production capacities to manufacture dietary supplements for boosting the immune system and for protection against viruses, which are of vital importance at the times of a pandemic: Vitamins D3 and C, zinc, and others. Pharmacies started offering over 90 new DS in terms of dosage forms. The best-selling novelty is Vitamin C in the form of effervescent tablets Evalar Vitamin C Effervescent Tablets 2000 mg 3.8 g No. 15. In 2021, its sales were worth 91.6 million roubles. In 2021, the company extended its supplements portfolio by adding Miramed, the first toothpaste containing the antiseptic molecule benzyldimethyl [3-myristoilamine)-propyl] ammonium chloride monohydrate. The manufacturer is promoting Miramed Antiseptic as a toothpaste fighting against gum inflammation and protecting against cold viruses.

American Solgar Vitamin and Herb (7.2%) ranks second, having increased its sales by 1.6%. The company has only one brand, Solgar, which is a series of dietary supplements with various action spectra: from supplements to maintain the gastrointestinal balance to supplements supporting the central nervous system. Sales volumes of the company's five major products names increased. The highest growth was observed in products recommended by the manufacturer as an additional source of magnesium – Solgar Magnesium Citrate (+31.1%), of Vitamin C, zinc and copper – Solgar Skin, Nails and Hair (+26.7%), and of iron – Solgar Gentle Iron (+22.2%). One of the DS groups in the manufacturer's portfolio is declining in sales: Solgar Vitamin D3 (-32.6%), Solgar Multi I (-30.2%), and Solgar Zinc Picolinate (-13.4%).

PharmaMed (5.3%) with its major supplement Bac-Set (a 46.2% share in the manufacturer's sales) went up to rank third, having increased its sales volumes by 21.6% in roubles. The company's portfolio comprises 9 brands. Most of all, the growth in sales was boosted by the increased demand for kids vitamins Kids Formula (+64.0%), the dietary supplement for men's health SpermActin Forte (+44.3%), and the multiprobiotic for adults and children Bac-Set (+38.6%) to maintain and restore the normal intestinal

Table 21

TOP-20 DS manufacturers in Russia in 2021

Note: *«manufacturer» means the parent company that may incorporate several manufacturing sites.*

Ranking	Manufacturer	Value, mln roubles	Share, %	Growth, % 2021/2020
1	Evalar	**13 834.6**	**16.2%**	**16.1%**
2	Solgar Vitamin and Herb	**6 123.1**	**7.2%**	**1.6%**
3	PharmaMed	**4 543.9**	**5.3%**	**21.6%**
4	Kvadrat-C	**3 247.1**	**3.8%**	**20.3%**
5	Stada	**2 918.4**	**3.4%**	**-14.8%**
6	Unipharm	**2 893.7**	**3.4%**	**20.7%**
7	Binnopharm Group	**2 391.9**	**2.8%**	**47.3%**
8	Queisser Pharma	**2 336.6**	**2.7%**	**12.6%**
9	Vneshtorg Pharma	**2 246.0**	**2.6%**	**18.6%**
10	Dr.Reddy's	**2 025.4**	**2.4%**	**8.4%**
11	Bayer	**1 722.4**	**2.0%**	**21.2%**
12	OTCpharm	**1 567.7**	**1.8%**	**-24.1%**
13	Bausch Health	**1 399.9**	**1.6%**	**-5.8%**
14	Laboratoires Ineldea	**1 238.0**	**1.4%**	**27.4%**
15	Mirrolla	**1 011.9**	**1.2%**	**68.3%**
16	Natures Bounty	**842.0**	**1.0%**	**-17.1%**
17	Biokor	**748.0**	**0.9%**	**6.0%**
18	Polpharma	**720.6**	**0.8%**	**-3.3%**
19	Recordati	**707.8**	**0.8%**	**-19.4%**
20	Pharm-Pro	**690.4**	**0.8%**	**10.1%**

microflora. Vitamins, minerals and medicinal plant extracts for optimal weight correction under the Diet Formula line (-24.3%), and Life Formula, a specialized line of biocomplexes with medicinal plant extracts for women (-19.9%), became less popular than a year earlier.

High growth rates were demonstrated by Mirrolla (+68.3%). Most of the profits gained by the Russian manufacturer came from the Mirrolla line of dietary supplements (58.1% in the company's sales; +101.0% against 2020). The maximum growth was observed for Synbiotic Max (+7,850.6%) used to help the normalization and maintenance of the normal intestinal microflora.

Second by the growth rates was another Russian manufacturer, Binnopharm Group (+47.3%). The manufacturer has a narrow product line, only 4 brands; the brand that contributed to the company's growth most of all was Maxilac (+47.8%) to maintain the balance of the gastrointestinal microflora.

The negative dynamics in sales of OTCPharm (-24.1%) were mostly due to the decline in the sales of Junivit (-92.3%), Uronorm (-46.9%), and Asvitol (-28.2%).

6. Cosmetics

For a long time, the pharmacy assortment was expanding on account of parapharmaceuticals, and this process was driven by cosmetic products. In the first place, it happened because pharmacies looked for a more marginal product category and, in the second place, because consumers saw pharmacies as one of the most reliable sales channels, which offered, among other things, exclusive items with declared effects proved by clinical studies.

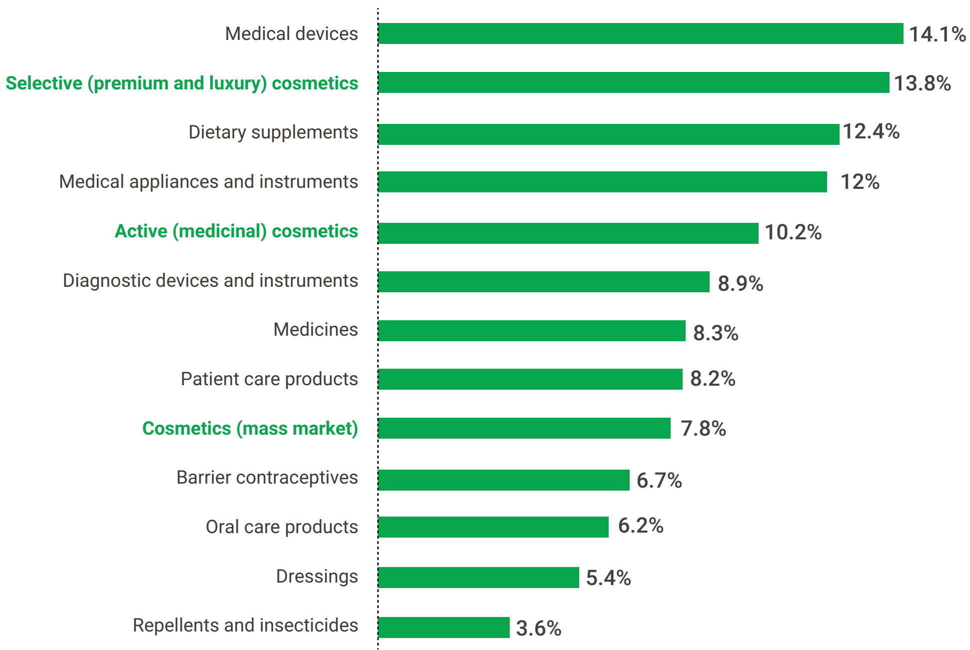
In 2020–2021, the cosmetics sales structure changed significantly. Last year, it was mainly due to the impact of Covid-19. The year 2021 triggered the consumer's shift towards online channels. Pharmacies had to compete for the consumer attention with the e-commerce segment: amid the pandemic and the development of social networks, it became much more convenient to buy products in the Internet. The segment of pharmacy cosmetics had to compete not only with pharmacy Websites and marketplaces, but also with online stores having a strong position in the beauty industry.

According to research findings of MIGEL AGENCY, pharmacies now rank 4th as a potential channel for selling cosmetics: the top-ranking, as before, are supermarkets (Magnit, Auchan); second come large chains (Rive Gauche, L'Etoile); online stores (including marketplaces such as Ozon, Wildberries) now come third. 40% of consumers have bought and continue buying cosmetics in

Figure 36

Online sales of basic pharmacy assortment groups in total sales volumes

ECom share by types of goods, rub., 2021



pharmacies. It must be said, however, that surveys show that in 2021 41% (from 24%) of respondents chose to buy cosmetics more often online, and only 26% opted for offline (against 49% in 2020).

No wonder that even on the already existing "pharmacy" Internet platforms, cosmetics take the lead in the overall sales of cosmetic products.

All in all, over 2021 cosmetic products ordered via online pharmacy channels made for around 11%, which is 2% more than in 2020 (+37% in the online segment). Cosmetic products that can be found mainly in pharmacies (it is about selective cosmetics brands such as La Roche-Posay, Vichy, Bioderma, and the like) are more often ordered via the Internet; their share is 13.8%. The higher share of this group of products is linked, among other things, to the answer to the question why consumers prefer to use online media for making purchases: because such media offer the best price. Selective cosmetics have the maximum average weighted per package price (around 1,000 roubles), that is why this category is characterized by higher price sensitivity.

Among competitors for pharmacy cosmetics (and for pharmacies in general) are also large supermarkets. Following the example of Magnit Cosmetics, another cosmetics retailer plans to launch the so-called drogerie format by opening pharmacy outlets within its cosmetics and perfumery stores. At the end of 2021, L'Etoile opened the first pharmacy at the premises of its cosmetics and perfumery store in Novy Arbat in Moscow. The pharmacy is operated by Alkor & Co. LLC that manages the chain of L'Etoile stores. Now, the company holds licenses for 5 pharmacies. L'Etoile plans to open a chain of pharmacies, but not a big one – up to 15 pharmacies in Moscow and several pharmacies in cities with a population of over one million.

The spread of the coronavirus infection affected sales of cosmetics in Russia. In 2020, sales of cosmetics in pharmacies dropped by almost 7% in money terms. Negative trends were observed for this group as far back as in 2008–2009, when the financial and economic situation in the country was getting worse, the sales of products of this category were not growing and even dropped in 2010 by 3% in money terms against 2009. It should be noted that such negative dynamics are observed not only in pharmacy sales, but also in sales of cosmetics through other channels.

In the first half of 2021, the demand for cosmetics started to recover after a slump in 2020. If we compare sales volumes with last year's figures by month, we will see that from May pharmacy cosmetics started demonstrating positive dynamics. All told, volumes sold in 2021 were 1.7% higher in roubles than in 2020. And cosmetic products became one of the few groups in the pharmacy assortment to show such dynamics.

Covid-19 accelerated the appearance of new trends also in the beauty industry, and in particular, in the segment of pharmacy sales of cosmetics. Certain trends were triggered by the pandemic; others emerged as a result of quarantine measures and self-isolation.

Cleansers have always accounted for a large proportion of the cosmetics range. Amid the pandemic, the most demanded were antibacterial products for hand care: wet wipes, sanitizers and soaps. Before 2020, each year this product category saw a continuing decline, but last year it grew to 3% in roubles and to 7% in packages. In 2021, the consumer demand for these products remained (they accounted for 2% in value and for 5% in volume). Though in 2021 their sales declined in comparison with the peak 2020 – by -45.5% in roubles and by -30.6% in packages, sales volumes are still 3 times higher than in 2019. At the same time, the intensive use of sanitizers has its drawback – their drying effect on the hand skin. As a result, products that restore the damaged acid mantle of the skin, such as creams, serums, scrubs and masks with special formulations, started gaining in popularity. Over the year, the share of [B] Skin Restoration and Regeneration grew from 25.8% to 26.5% in roubles; against 2020, sales of restoring cosmetics grew by 4.7% in value terms.

The pandemic triggered additional upward dynamics in the skincare segment. One of the factors accounting for that is the perception of the process of buying: women see it, above all, as a chance to spend more time on their beauty as well as a way to take care of themselves and of their health. Covid-19 not only made us wash our hands with soap more often, but also wear face masks everywhere, which affects our skin. Skin becomes more sensitive and more vulnerable. The pandemic brought us a new term – "maskne". It refers to redness, irritation and even inflamed acne that appear on the face after wearing a mask for long periods of time. That is why among the products highly sought by consumers in 2021 were face care products (+2% in sales in roubles), especially, moisturizers (around 20% of sales of facial cosmetics).

Endless online communications and the need to wear a mask in public places significantly shifted the focus of interest towards hair care. The most significant growth for the year among products with intended use was observed in [V] Hair and Scalp Care (+1.0% to 2020 in packages). In absolute terms, the growth rate made for 5% and also hit its maximum.

Dynamics of the main types of goods, 2021/2020

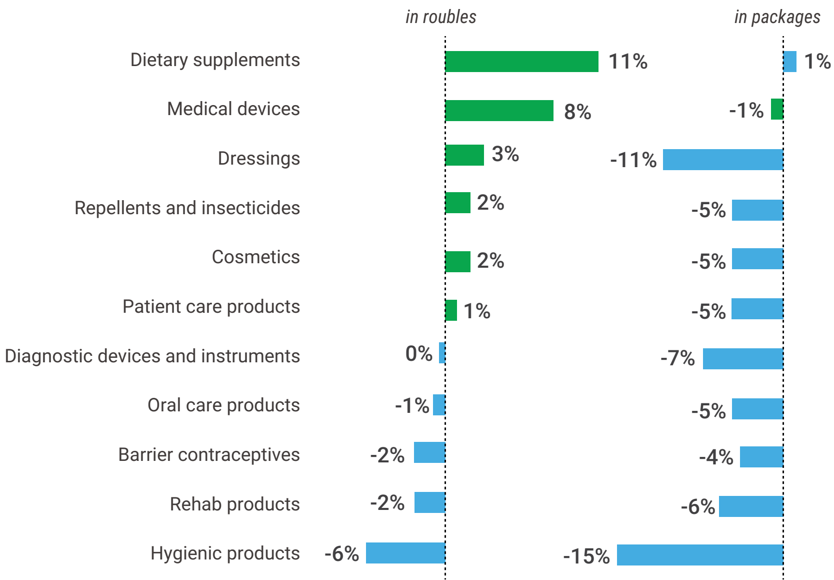


Figure 37

Dynamics of sales of the main non-drug product groups in pharmacies

As a result of all these trends, every year pharmacies expand the range of cosmetic products, and this expansion is because of the appearance of new brands as well as because of the extension of the existing product lines. In 2021, Russian pharmacies sold over 2,200 various cosmetic brands (21,355 SKU). Manufacturers offered 213 new brands to consumers. Among the most successful brands were: ranking 138th is Elatea (Pervoye Resheniye), the natural cosmetic brand offering a line of face and body care products; the 278th position belongs to Novatenol (Servier), the revitalizing and moisturizing spray foam for damaged skin; the 290th position belongs to Terra Organica (Geo Organics), a line of olive extract-based cosmetics. These brands managed to get into the top 300 by sales volumes in value terms because their overall sales during the analyzed period were worth over 99 million roubles.

According to 2021 results, cosmetics sales share is the third-largest (after medications and dietary supplements) in the pharmacy sales structure. Against 2020, sales grew by 2% in money terms and dropped by 5% in volume terms. The volume of cosmetics sales via pharmacies amounted to 165 million packages, or 44.8 billion roubles a year.

For the last 2 years, the markup on pharmacy cosmetics has been increasing: if in 2019 it was 39.7%, in 2020 it was already 42.1%, and in 2021 – 44.1%.

Cosmetic products can be classified by different parameters: price, intended use, age and social group, effect or indications for use. DSM Group conducted an analysis and suggested its own classification of cosmetic products according to their purpose, action and price. Cosmetic products sold through pharmacy chains were divided into 3 groups:

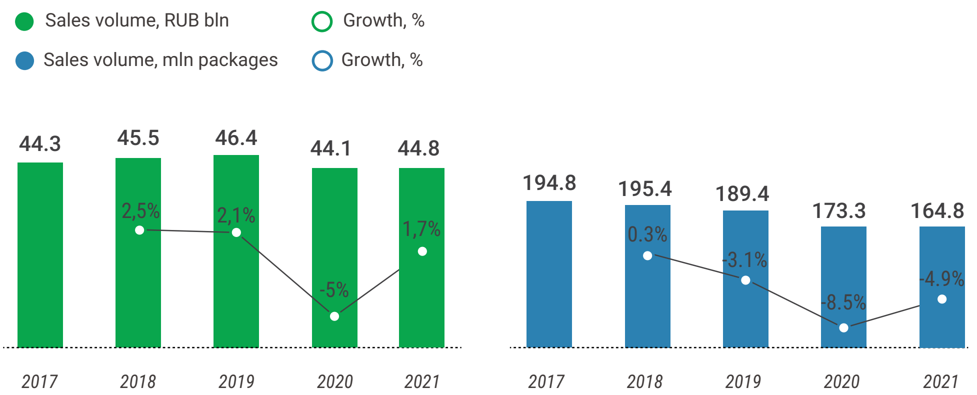
Active (medicinal) cosmetics are used for treatment and prevention of certain diseases and contain various biologically active substances (this category includes «Sofya», «Boro Plus», "911 Your Emergency Service", etc).

Selective (premium and luxury) cosmetics are characterized by specialized product lines, clearly distinguished between each other and intended for certain skin or hair conditions. As a rule, such cosmetics are sold mainly through pharmacies (Librederm, La Roche-Posay, Vichy, etc.).

Mass-market cosmetics – affordable cosmetics, intended for skin, hair and nail care

Figure 38

Pharmacy Cosmetics Sales Volumes Growth in Russia



and sold both through pharmacies and other points of sale (for example, Johnsons, Floresan, Nivea, etc.).

The sales structure on the pharmacy cosmetics market shifted towards medicinal cosmetic products: the share of active cosmetics grew by 1.1% in roubles, and by 4.1% in packages. Active (medicinal) cosmetics account for half the sales volume of all cosmetics and plays a major role in the overall dynamics of the pharmacy cosmetics market: +3.8% in value and +2.5% in volume. Over the year, pharmacies sold 926 brands of medicinal cosmetics from 454 manufacturers (4,700 full names). Promotion of these product items that are on the borderline between non-drugs and drugs and affordable pricing policies underlie the increased demand for this cosmetics category.

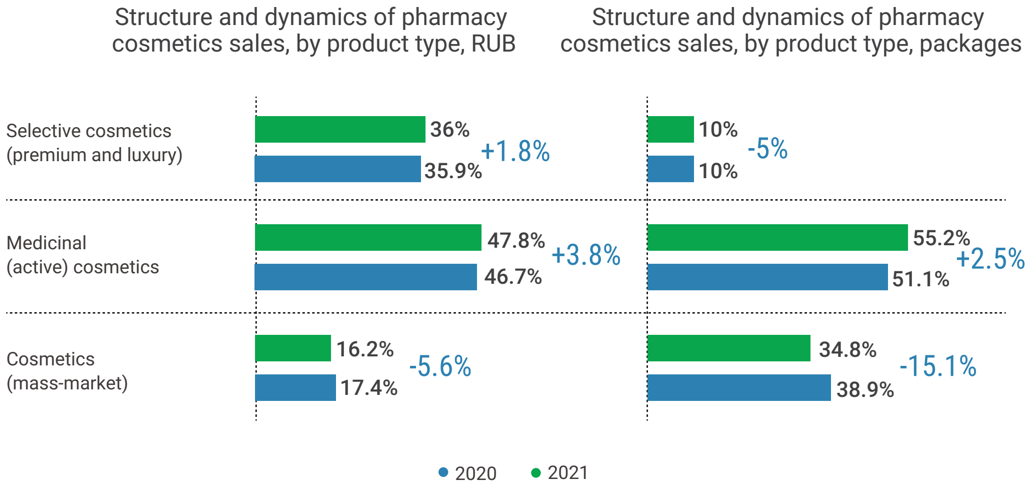
The share of selective cosmetics remained almost unchanged against the previous year (by less than 1%). Premium cosmetics remain the most marginal category. Whereas in roubles it accounts for 36.0%, in volume terms the share of luxury cosmetics is distinctly lower – 10.0%. Though in packages sales volumes dropped by 5%, in roubles this segment showed positive dynamics: +1.8% to the previous year. The highest growth rates among the top 20 luxury cosmetics brands were observed in 8.1.8 Beauty Formula (+1,188.3% in roubles), Eucerin (+99.3%). and CeraVe (+86.7%).

Pharmacies are not the main promotion channel for mass-market cosmetics. However, this sub-segment accounts for 34.8% of the market in volume and is popular among consumers, since it offers quite affordable products. As a result, mass market cosmetics account for 16.2% in roubles. In packages, this segment saw the heaviest drop (-15.1% to 2020). Most often, products of this category are bought in pharmacies impulsively, or in addition to some drugs. In 2021, customers were more conscious in their choices seeking particular products in pharmacies.

In 2021, the average weighted price of a cosmetic product in retail pharmacy prices was 272 roubles per package. The price rose by 7.0% against 2020. If we look at the market

Figure 39

Structure of sales via pharmacies depending on the type of the cosmetic product



segment by segment, we can see that prices in all the categories have increased. The price of one package of active cosmetics has increased by 1.2%, prices for premium products and mass market cosmetics have grown by 7.2% and 11.1% respectively.

Pharmacies offer their clients a wide range of cosmetic products in various forms and with different intended purposes. Multi-purpose cosmetics are the most in-demand (its share of the sales volume in packages was 35.9%). And it is not surprising as around 53.4% in the structure of the multi-purpose cosmetics market belong to antibacterial, antiseptic and wound care products. In money, the highest share is with face skincare products: 24.8%.

Five top-ranking groups showed positive sales dynamics. The highest growth among all the groups was observed in feet cosmetics (+7.7% in roubles) and hair and scalp products (+5.8%). In volume terms, on the contrary, most of the groups saw a decline in sales; the most significant drop was observed in facial products (-16.1% in packages). At the same time, sales of hair and scalp care products and lip care products increased by 4.6% and 1.2%, respectively.

The largest share in cosmetics structure according to the age criterion belongs to cosmetics intended for all age groups (80.0% of sales volume in value and 81.1% in volume). Next come cosmetics for babies and children (from 0 to 14 years old): 8.6% in roubles and 13.9% in packages. Third-ranking are cosmetics for young adults (older than 25), with the market share of 5.4% in roubles. There is a preponderance of high-priced premium and luxury cosmetics in this category – 80.2% of rouble volumes come from selective cosmetics. The majority of cosmetic products for middle aged people (after 45) and for teenagers and young people (14–25 years old) are in the high price range: selective cosmetics hold around 73% of sales value. The segment of cosmetics for the elderly (over 60 years old) demonstrates the maximum rates of drops in money (-36.5% to 2020).

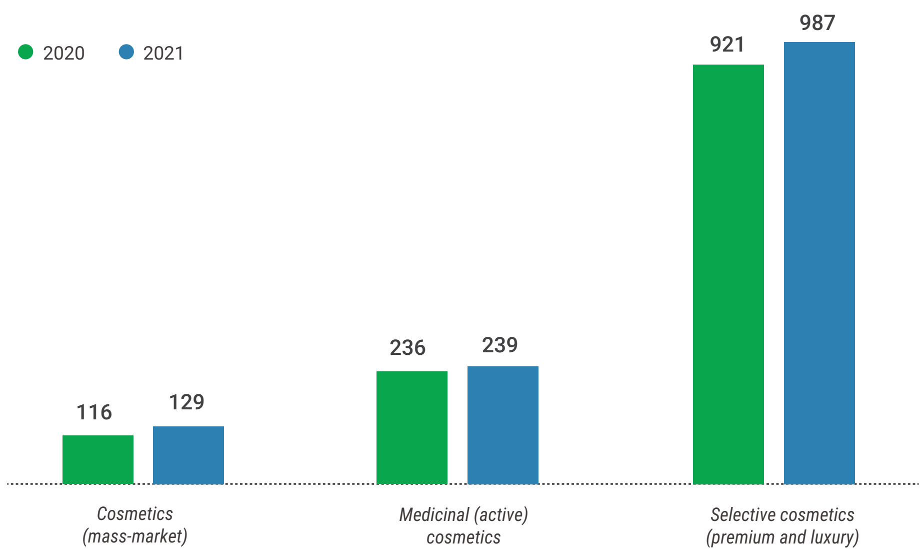


Figure 40

Weighted average price of a cosmetic product in pharmacies

Russian cosmetics are more in demand on the pharmaceutical market than imported brands, domestic cosmetic products make for over 76.1% of the sales volume. When analyzing sales volumes in roubles, it should be noted that the market is divided almost in half, but imported products prevail slightly (about 50.4% of sales).

Within segments, the domestic to imported cosmetics ratio notably varies.

In 2021, premium cosmetics were mostly represented by imported cosmetic products, which hold 85% of the market in roubles and 66% in packages. Librederm, a Russian brand, has 95.9% of domestic selective cosmetic sales in roubles.

The segment of medicinal (active) cosmetics is represented, on the contrary, mostly by Russian brands that lead both in value (72%) and in volume (83%).

The share of domestically-made cosmetics in the mass market segment grew against the previous year by 0.5% in roubles and by 3.9% in packages. The key made-in-Russia brands are: Detskiy Krem, Kora, and Moyo Solnyshko, which together hold a 19.1% market share in roubles.

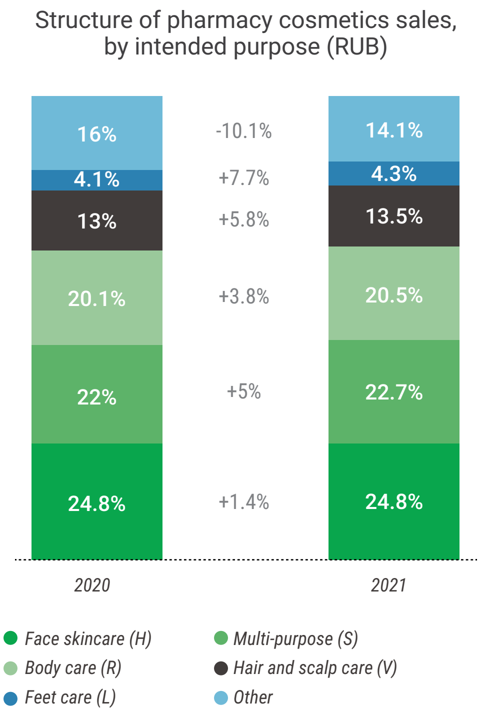
Selective cosmetics

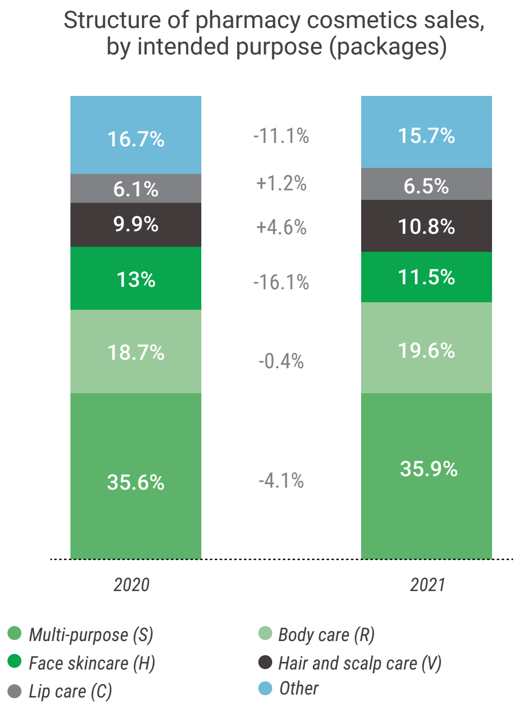
In 2021, pharmacies sold 16.0 million packages of premium cosmetic products for around 15.8 billion roubles (in retail prices). Compared with the previous year, sales grew by 1.8% in rouble terms and dropped by 5.0% in volume. Six brands from the top ten suffered a noticeable drop in sales against 2020.

The positioning of selective cosmetics as pharmacy cosmetics is no longer relevant: manufacturers want to keep up to date and seek to work with large online marketplaces. It also affects the sales dynamics.

Figure 41

Cosmetics Structure According to its Intended Purpose in 2021





But most of all the demand for this category was surely affected by the macroeconomic situation. Due to its high cost, this market segment is sensitive to the decreasing purchasing power of people whose real disposable income remains as low as ten years ago.

Changes were observed only in the lower part of the ranking of the leading brands. La Roche-Posay, a French brand, retained the first place, due to sales growth by 7.8%. The brand's market share increased noteworthily – by 1.6% to 28.6% in money terms. La Roche-Posay cosmetic products, formulated with thermal water, are specifically designed for problem skin, that is why 39.0% of the brand sales come from Effaclar lines (product lines designed for oily and problem skin care) and Lipikar (face products against irritation and itching).

At the end of 2021, Vichy cosmetics (-2.2%) ranked 2nd. The share of Vichy brand in the selective cosmetics segment shrank (-0.8%, to 19.2%). All in all, pharmacies sold 378 SKUs in product lines with an average price of 1,529 roubles. 34.4% of products are anti-ageing and anti-wrinkle products [A13]. About 42.9% in value terms belong to face care products, Vichy also offers a rich assortment of body care (20.1%), and hair and scalp care (19.9%) products.

Russian Librederm ranks 3rd in the selective cosmetics category: the brand's market share shrank from 15.9% to 14.2% in the segment's value volume as a result of a 9.1% drop in sales compared with 2020. However, Librederm product lines account for 33.4% of sales volume in packages, and for this reason Librederm can be still considered to be the most popular selective cosmetics brand among pharmacy customers. The drop in the brand's pharmacy sales was due to the intensive promotion of the brand in its own stores and on various online marketplaces. Its product line incorporates 393 full product names, of which face care products have the largest share (63.3% in roubles).

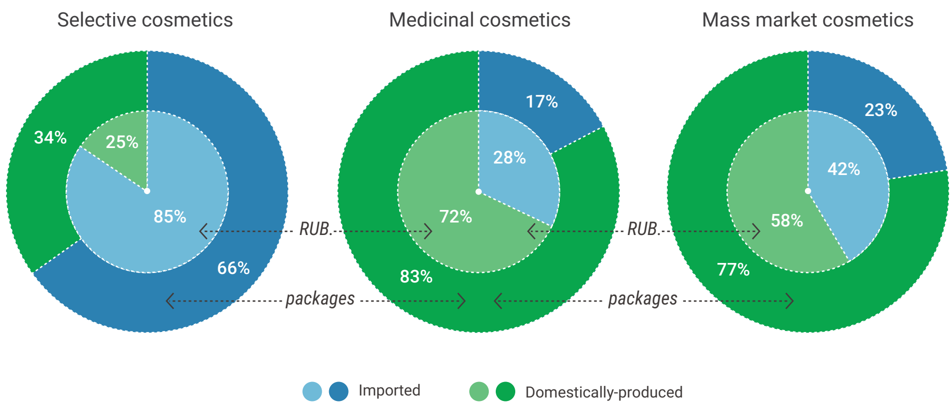


Figure 42

Pharmacy cosmetics sales shares by origin depending on the type of cosmetic product in 2021

Table 22

TOP 10 selective cosmetics brands in 2021

Ranking	Change	Brand	Sales volume, mln roubles	Share, %	Growth, % 2021/2020
1	-	La Roche-Posay	**4 527.1**	**28.6%**	**7.8%**
2	-	Vichy	**3 038.3**	**19.2%**	**-2.2%**
3	-	Librederm	**2 241.2**	**14.2%**	**-9.1%**
4	-	Bioderma	**1 417.6**	**9.0%**	**16.2%**
5	-	Avene	**1 009.4**	**6.4%**	**-8.0%**
6	+2	CeraVe	**655.2**	**4.1%**	**86.7%**
7	-1	Uriage	**513.4**	**3.2%**	**-9.4%**
8	+1	Filorga	**363.2**	**2.3%**	**15.5%**
9	+1	Ducray	**281.4**	**1.8%**	**-6.4%**
10	-3	Mustela	**247.5**	**1.6%**	**-30.4%**

Table 23

TOP-10 brands of active (medicinal) cosmetics in 2021

Ranking	Change	Brand	Sales volume, mln roubles	Share, %	Growth, % 2021/2020
1	-	Loshadinaya Sila	**742.5**	**3.5%**	**-11.2%**
2	-	Lactacyd	**715.2**	**3.4%**	**-1.7%**
3	-	Alerana	**712.8**	**3.4%**	**7.1%**
4	-	911 Your Emergency Service	**638.8**	**3.0%**	**7.2%**
5	+3	Lipobase	**564.7**	**2.7%**	**23.1%**
6	+1	Cetaphil	**507.2**	**2.4%**	**9.6%**
7	+3	Zinovit	**487.7**	**2.3%**	**20.9%**
8	-2	Boro Plus	**431.3**	**2.1%**	**-10.1%**
9	-4	Emolium	**425.0**	**2.0%**	**-13.9%**
10	-1	Dry Dry	**399.4**	**1.9%**	**-4.3%**

The maximum growth rates were observed in CeraVe products for intense skin hydration (+86.7%; +2 position lines), which contain ceramides to repair and strengthen skin barriers. The leading products within the brand are moisturizers.

Medicinal cosmetics

Manufacturers are marketing active cosmetics as products that not only solve aesthetic problems, but also have therapeutic properties. This group of cosmetic products dominates the pharmacy market. Premium cosmetics mainly target facial skin problems, while medicinal cosmetics have a wider range of indications for use. Most of sales in this assortment group come from products used in the treatment of strains, bruises, inflammation of joints (a 10.4% share in roubles), for various skin conditions and injuries - cuts, bruises, cracked skin, burns (9.9%), for skin prone to allergic reactions (8.4%).

The top 10 brands account for 26.8% of active cosmetics sales, which is significantly lower than in the luxury brands segment (90.4%). This is partly due to the fact that selective cosmetics lines are very wide and are aimed at addressing a number of problems at a time. Active cosmetics brands are usually promoted as products meant for addressing one specific problem. Consequently, the category range is quite wide: pharmacies offer more than 900 brands of medicinal cosmetics.

Changes were observed in the lower part of the ranking. As before, Loshadinaya Sila (Horsepower) remains the leader among medicinal cosmetics brands (a 3.5% share in the group), despite a 11.2% decline in sales. Body care products, used in the treatment of strains, bruises and joint conditions, account for 48.1% of the brand's sales volume in roubles.

The second place goes to Lactacyd (a 3.4% share), a line of products for daily intimate hygiene, formulated with natural lactic acid, which helps to restore and maintain a healthy vaginal flora. Over the year, the brand's sales dropped by 1.7%. The product line includes around 20 product names.

Alerana is a cosmetic product developed for hair and scalp care. That is why, 70.7% of products manufactured under this brand are shampoos. After a 7.1% increase in sales, Alerana retained its 3rd ranking and increased its share by 0.1% to come to 3.4%.

By maintaining high growth rates for several consecutive years, the following brands in the top 10 demonstrated the best performance: a line of Lipobase family products for the treatment of sensitive, dry and irritated skin (+23.1%; +3 position lines), and Zinovit zinc-based broad-spectrum products (+20.9%; +3 position lines) intended, inter alia, for prevention of dandruff, treatment of irritated and peeling skin, and acne conditions.

Emolium special-purpose dermatological products for dry skin prone to psoriasis and atopic dermatitis moved down from the 5th to the 9th position line due to a 13.9% drop in sales.

Mass-market cosmetics

Multi-purpose cosmetics make for 36.5% of mass-market cosmetics that are mainly intended for cleansing (20.6%).

Changes in the ranking of mass market cosmetics are more distinct than in the top 10 in other categories. The top three brands are last year's leaders. The first place traditionally goes to Johnson's children cosmetics (a 6.3% share in roubles). A notable share in the competitive environment by value volumes of sales belongs to two Russian brands - Detskiy Krem (4.6%), and Kora (3.3%).

Six out of the ten brands holding the key positions showed positive dynamics. The maximum growth in sales was observed for: Asian Ullex cosmetics (+38.3% against 2020; +9 position lines) for daily facial care, and Russian EVO specialized products (+13.8%; +4 position lines) to repair and maintain healthy skin and hair, for special and daily care.

The most notable downgrading was observed for Novosvit (-21.3%; -3 position lines), offering a line of face and body care products intended to moisturize and nourish the skin, repair the epidermis and activate its protective functions, and promote active rejuvenation.

A distinctive feature of the ranking of mass market cosmetics sold in pharmacies is a variety of baby/kids brands. 23.6% of products sold are products for babies and kids (0-14 years old). Three children's brands are found in the 2021 ranking, they are the major brands in this category (accounting for 62.9% in roubles of all mass-market cosmetics for children, sold through pharmacies).

Table 24

TOP-10 brands of mass-market cosmetics in 2021

Ranking	Change	Brand	Sales volume, mln roubles	Share, %	Growth, % 2021/2020
1	-	Johnsons	**446,6**	**6,3%**	**-7,6%**
2	-	Detskiy Krem	**324,9**	**4,6%**	**8,1%**
3	-	Kora	**235,0**	**3,3%**	**-11,4%**
4	+1	Neutrogena	**231,9**	**3,3%**	**12,8%**
5	-1	Moyo Solnyshko	**228,3**	**3,2%**	**0,6%**
6	+4	EVO	**203,4**	**2,9%**	**13,8%**
7	+9	Ullex	**185,0**	**2,6%**	**38,3%**
8	+4	Chlorohexidine	**173,5**	**2,4%**	**3,2%**
9	-	Laino	**170,3**	**2,4%**	**-6,3%**
10	-3	Novosvit	**149,2**	**2,1%**	**-21,3%**

7. Pharmacy chains

The «new reality» is particularly true for retail pharmacies. And it is not just a matter of online commerce. Although it was the authorization of over-the-counter drug delivery that has triggered these changes. The market has become attractive to many players whose names were not previously associated with «pharma». On the one hand, this should increase the number of points of sale and outlets (and, consequently, make drugs more accessible to the public), but on the other hand, it can intensify competition for «traditional» players (which may have a negative impact on their efficiency and result in their closure).

As of the end of December 2021, there were 65,600 pharmacies in Russia. It is only a 1.7% increase from the previous year (+1,080 outlets).

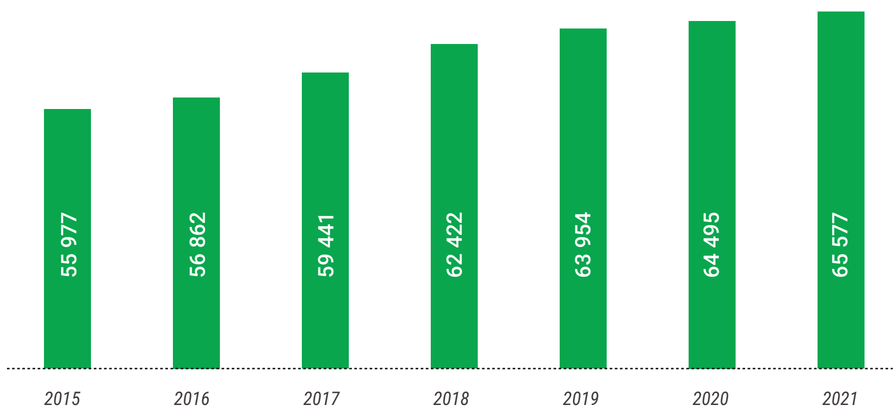
The increase is caused by the growth of federal chains (+1,700 outlets, mainly due to the pharmacy chains Aprel, Implosia, Planeta Zdorovya) and interregional chains (+2,720 outlets due to Aptechnaya Set 36.6 moving into this category while expanding its geographical presence). But the number of single outlets and small chains continues to decline (by 1,045 in 2021).

There was no boom in new pharmacies opening in 2021. But projects to create them were launched or announced. The state is still an active player in this market. For example, since January 1, 2022, medical workers in rural areas have been allowed to sell drugs and dispense subsidized medications. This will solve the problem of making drugs available to people living in rural areas without pharmacies.

In fact, state pharmacies can become one of the main players to increase sales outlets in sparsely populated or hard-to-reach communities. In 2021, the state chain Gubernskiye Apteki launched the Drugs for Villages project, which started delivering sets of drugs and first aid medications to

Figure 43

Number of pharmacy outlets in Russia



people living in remote areas of Krasnoyarsk Krai. The list includes 435 municipalities.

In Irkutsk Region, the Pharmacy on Wheels project was developed as part of the Mobile Pharmacy in Rural Areas program, created by a member of the Youth Parliament. It is aimed at providing medicines to the residents of villages and communities where there are no stationary pharmacies. Since no federal law permitting the operation of mobile pharmacies has yet been passed, a «hybrid» format was implemented in the region. First, the Youth Parliament members traveled to the villages and collected applications from the residents, then purchased drugs at wholesale prices and made home deliveries.

Meanwhile, in Saratov Region, state pharmacies are being revived in general (after their privatization and sale). 180 state pharmacies and pharmacy outlets are expected to open there in 2022. They will be located in medical facilities. The first two state pharmacies opened in the region in 2020 and ten more in 2021. During the year, Kurskaya Pharmatsiya expanded its presence in Kursk Region by opening its pharmacy outlets in all outpatient clinics of the region to dispense subsidized medicines.

One of the active players, which is trying itself in all kinds of fields, is Russian Post, a Russian postal operator. In 2021, Russian Post was granted an indefinite license for the wholesale trade, storage and transportation of drugs. The company plans to deliver drugs from its pharmaceutical warehouse opened at the Vnukovo logistics center to pharmacies, medical institutions and distributors. The company also plans to create licensed sorting centers for storing and processing drugs in cities with populations over 500,000.

In 2021, Russian Post obtained a permit for the remote retail sale of drugs. Last January, the company launched a website, pochta-apteka.ru, to sell drugs, which operates on an online booking basis. The portal users can order drugs to be delivered to some post offices. In addition, there is the website market.pochta.ru.

The company's offices became home to its first pharmacies. A pilot project to sell drugs in post offices was launched in 2019 in Samara Region. In 2021, pharmacies started operating in the post offices of Moscow, Ulyanovsk Region, Chuvash Republic, etc. (a total of 11 regions). In 2022, Russian Post plans to launch a project to create mini-pharmacies on the premises of its offices in the regions of the Far Eastern Federal District. Next year, kiosks and pharmacy outlets will appear in post offices in Khabarovsk Krai and Buryatia. Five billion roubles will be spent for this project. Another 15 billion roubles has been set aside for the upcoming stages.

Russian Post can take a significant share of the pharmacy market. This is also facilitated by government support. For example, in the fall of 2021, the President gave instructions to consider expanding the list of services provided at Russian Post offices, including the possibility of making drugs available to the public. The Ministry of Health and Russian Post are to prepare a plan for arranging drug sales in post offices across the country. By the end of 2025, 25,160 of the existing 37,000 or so post offices are scheduled to be gradually upgraded to meet this goal.

Of course, changes in the market conditions are not only caused by government agencies. For-profit companies are also showing interest in the pharmacy market and are looking for opportunities to expand their presence. For example, at the end of 2021, the first pharmacy appeared in L'Etoile cosmetics and perfume store on Novy Arbat Street. The chain plans to open a total of about 15 outlets in its existing stores.

Cooperation between pharmacy chains and grocery retailers is already an established trend. In 2021, Aloe began opening 15- to 110-square-meter points of sale in the checkout area of Lenta hypermarkets. The project will include 85 cities and create over 165 pharmacies. In addition, Rosneft and Aloe have jointly launched a service of road pharmacies, Apteka Auto, based at gas stations, where over-the-counter and non-medicinal drugs will be sold.

The influx of «new» players in the pharmacy market was «sparked» by the drug remote sale law of April 2020, which so far applies to over-the-counter drugs. In fact, the market had existed for quite some time. For many years, consumers had reserved drugs online to pick them up later in pharmacies. For example, Eapteka.ru appeared back in 2011, and a year later, in 2012, consumers welcomed today's most popular marketplace Apteka.ru. In 2021, the online pharmacy service added about 23,000 outlets and saw an 18% increase in turnover.

Eapteka.ru is now an online pharmacy store owned by Sberbank and called Sber Eapteka. The core business is built around the online sale of drugs, and now their delivery. As part of this evolution, Sber Eapteka began delivering over-the-counter drugs through Samokat delivery service, so far only in Moscow (home delivery should be within 1.5 hours). In Ulyanovsk Region in October 2021, Sber Eapteca began delivery via Russian Post: Mail carriers bring the order the day after it is placed. The delivery is free regardless of the order price. Additional investments are made in particular to open pharmacy outlets on the premises of Sberbank offices, which will increase the number of points where online orders can be picked up.

After the law was passed, market players became able to make home deliveries of drugs. 780 pharmaceutical market players applied for remote sale permits (by the end of the year, about 400 legal entities were authorized sell drugs online, which geographically cover 57 regions).

The 2021 volume of pharmacy eCom was about 126.4 billion roubles (drugs and parapharmaceuticals), which corresponds to 8.7% of the pharmacy market capacity. At the end of the year, it was already at 10%. Whereas the sales dynamics across the market makes for around 3.5%, the online turnovers grew against 2020 by 36%. It should be noted that at the moment the online option is appreciated mainly by people living in Moscow. The share of pharmacy eCom in the capital is 18% (in December, it exceeded the «psychological» threshold of 20%). So, one third of all drugs ordered online are sold in Moscow.

In fact, the structure of the market as a whole has not changed much so far. Most consumers still prefer to order needed drugs online and pick them up later at a conveniently located pharmacy. There are several factors at play here. The first reason is that the law applies to OTC drugs only. Interestingly, the share of OTC drugs has not increased since the authorization, but, on the contrary, has decreased: it was around 39% in June 2020 and 34% in June 2021. At the end of 2021, Rx drugs ordered online accounted for 62.5% of the total volume of all drugs (around 52% across the market). The weighted average cost per package of prescription drugs is 2.2 times higher than that of over-the-counter drugs. Which means that the consumer is again looking for more expensive products at a better price, using the websites of pharmacy aggregators and marketplaces. This is why brand rankings are shifting towards high-priced prescription drugs.

A study of the pharmacy eCom structure shows some interesting facts, which indicate that there are a number of limitations and peculiarities in the development of this segment, and it is very unlikely to completely replace the traditional pharmacy.

Pharmacies offer not only drugs, but also a huge selection of various parapharmaceutical groups of products, which are also fully available at online pharmacy marketplaces. And of course, when it comes to online sales of drugs, it is assumed that it is this category that should be most in demand with the consumer. But, in fact, this is not yet the case. Drugs ordered online are in the middle of the list and account for about 8% of all drug sales. Some categories have a higher eCom share of the total volume. For example, medical supplies with a share of about 14% or selective cosmetics (share of 13.8%).

The main reason for this trend is that drugs are largely fast-moving consumer goods that are needed here and now, and even «one day for delivery» can be critical for this category. But for other types of pharmacy products, it's not so much of an issue. What is more important is the cost of the necessary item. Online platforms offer the best deals and allow customers to wait until they can buy the required item for the lowest possible price. Moreover, the weighted average cost per package is higher for such groups, so the difference between online and offline prices can be significant.

The share of pharmacy marketplaces remains high in the structure of the overall online pharmacy market. The Top 3 platforms account for 64.7%.

But over the past year, there has been an increase in pharmacy aggregators (unlike marketplaces, they only offer the products available at participating pharmacies, while marketplaces offer products that are available at the distributors' warehouses). Previously, they only informed customers about availability and prices in pharmacies, but now they already allow them to book goods in a convenient pharmacy connected to a particular service. One of the largest aggregators is Uteka. About 50,000 pharmacies are currently connected to it. Among other major aggregators are Megapteka.ru (over 20,000 pharmacies) and 009.RF (14, 000 pharmacies). Even if pharmacies have their own online services, they also connect to such aggregators to gain additional visibility and increase sales.

Figure 44

Pharmacy eCom Dynamics, 2019-2021

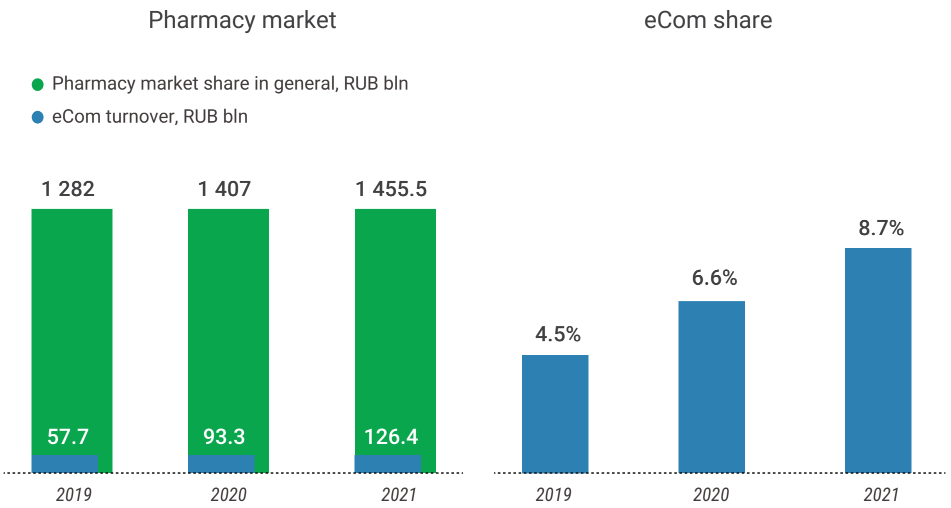


Table 25

Ranking of remote order services by sales turnover in 2021

** The volume is shown only for the products ordered online.*

Ranking	Remote order service	Number of pickup points	Value, billion roubles	Turnover increase compared to 2020	Share in commercial segment, 2021
1	Apteka.ru	**22 840**	**59.3**	**18%**	**4.1%**
2	Sber Eapteka	**892**	**15.4**	**62%**	**1.1%**
3	Zdravcity	**19 750**	**9.1**	**45%**	**0.6%**
4	Uteka	**50 000**	**3.0**	**-**	**0.2%**
5	Asna.ru	**7 000**	**1.0**	**-**	**0.07%**
6	009.RF	**14 000**	**0.7**	**-**	**0.05%**

The changes in legislation have not only made it possible for pharmacy chains to sell drugs remotely, but also provided access to the pharmaceutical market for the largest online retail players, some of which have obtained pharmacy licenses and started to include over-the-counter drugs in their product range. This has also been facilitated by more simplified rules for entering the online market. Effective September 1, 2021, only one sale point is enough to get an online license. Now it is also legal for pharmacies to enter into contracts with the owners of aggregators to place offers and trade through their websites.

Such companies as Ozon, Yandex.Market and Wildberries are already selling drugs online. Yandex.Market began delivering over-the-counter drugs to the door via the express-delivery option. It is the second marketplace to receive a license to sell drugs online (after Ozon). Now it collaborates with such pharmacy chains as Dialog, Rigla and Samson-Pharma (all in all, orders can be picked up in 3,500 pharmacies). Wildberries offers some products of CV Protek and the pharmacy chain Monastyrev.

AliExpress Russia has opened a pharmacy showcase of drugs available for reservation. Customers can reserve items online and pay for them at the pharmacy. The product range, which includes over 15,000 items, is provided by the Vse Apteki service.

Grocery retail also plans to actively participate in online drug delivery. VkusVill began delivering drugs from its own dark stores in the summer of 2021. For this purpose, the company entered into partnership agreements with the pharmacy chains Planeta Zdorovya and Serdce Rossii (the companies assemble orders). Azbuka Vkusa plans to enter the online OTC drug sale market in 2022. The grocery store chain has not yet found partners to open pharmacies, but its supermarkets have already begun stocking the shelves with dietary supplements. The retail chain Perekryostok has received a license to handle pharmaceuticals too — drugs are available on its marketplace Vprok.ru.

SberMarket, an online service for home delivery of groceries and goods, has begun delivering drugs. SberMarket delivers items from pharmacies that are part of the Erkapharm Group. The technical partner of the project is the Vse Apteki service. Delivery started in Moscow and St. Petersburg, and will expand to cities with a population of over a million people in the future.

As part of its online sales efforts, Magnit opened its first pharmacy dark store in Krasnodar in October 2021. It will operate in a click&collect pharmacy format. Its total area is about 250 sq. m. Customers have access to a wider range of products than in the traditional Magnit Apteka – about 8,000 items. The dark store will deliver online orders to about 30 pharmacies.

Another impetus for the accelerated eCom growth could be the authorization of prescription drug delivery. Both public organizations and the business community are lobbying for the adoption of amendments to the legislation. But the right thing to do would probably be, first, to fully implement an electronic prescription system, and then to allow delivery of all drugs. All pharmacies must connect to the unified state health care information system, in which electronic prescriptions are processed. Under Order No. 66 of the Ministry of Health, all the 85 regions of the Russian Federation must adopt this system by 2023. Therefore, delivery of Rx drugs is unlikely to be authorized before this time.

In general, the capacity of the pharmacy market in 2021 was 1,456 billion roubles (+3.5% as compared to the previous year). Despite the rapid eCom growth, consolidation in the market is still on the rise. In 2021, the share of the TOP-20 was 69%, which is 3% higher than in 2020.

Figure 34 shows the growth of turnover and number of outlets in the top 20 pharmacy chains in 2018–2021. In 2021, the Top 20 had 43,700 pharmacies, which is only 21% more than in 2020. In the 2021 ranking, 11 chains had over 1,000 outlets, and all were ranked 1 through 11.

The major factor in the increased concentration of the top 20 players in 2021 was the acquisitions of pharmacy chains. Over the past few years, the process of consolidating and merging pharmacy chains has slowed down and mainly involved the acquisition of small regional companies.

The year 2021 saw one of the biggest deals of recent years. Katren holding from Novosibirsk closed the deal to purchase a controlling stake in the pharmacy chain Erkapharm. Katren already owned the chain Melodiya Zdorovya. Combining the sales volumes of the two players brought the holding company to the third position in the ranking with a share of

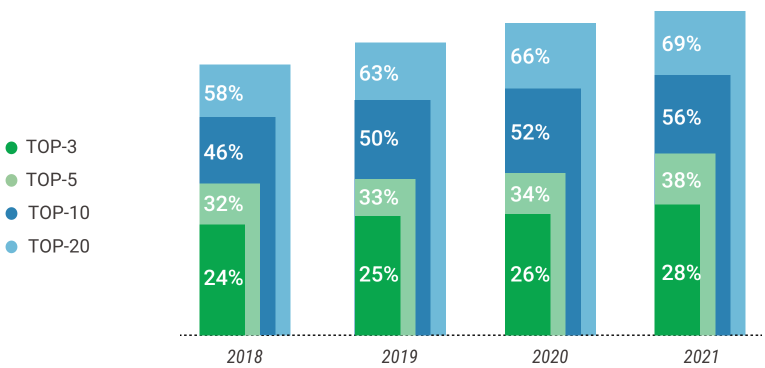


Figure 45

Concentration of TOP-20 Pharmacy Chains

6.1%. The main purpose of the acquisition is to strengthen the position in distribution in order to increase the share in the largest chains. In addition, some Erkapharm pharmacies were rebranded as Apteka.ru, which means that the deal also helped the online service increase the number of pickup points.

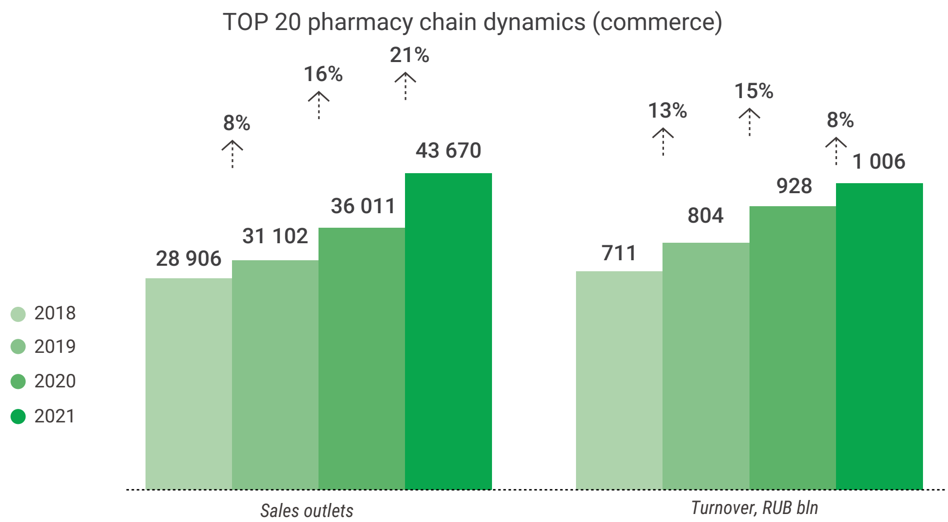
By the way, Protek is doing the rebranding in order to expand its ZdravCity service. Zhivika pharmacies (the discounters of the Rigla pharmacy chain) have begun to operate under the ZdravCity brand in Moscow Region. The gradual rebranding of the capital's retail outlets will be completed in the spring of 2022. In June 2021, the project was joined by the chain's discounters in other regions – Central Russia, Arkhangelsk Region, Kaliningrad and Siberia. A total of about 240 pharmacies will be involved. Rigla has also announced the acquisition of the retail chain Apteki Vyatki (12 pharmacies) in Kirov. It is entering a new region to expand the geography of its presence. Some of the acquired pharmacies will operate under the ZdravCity brand.

Aptechnaya Set 36.6 has once again begun its regional expansion. Earlier, the player focused on expanding in Moscow Region. In 2021, it acquired a chain in Tver with a similar name – 36.6 Zdorovye.

Neopharm has increased its presence in Moscow and Moscow Region by managing the Moscow branch of Aptechnye Traditsii Group. The Moscow branch of Aptechnye Traditsii includes 31 outlets in Moscow, 36 pharmacies in the towns surrounding Moscow, and 5 outlets in Obninsk. It is not rebranding, but the chains will have the same pricing and product range policy.

Figure 46

Dynamics of Growth in the Sales Turnover and Number of Outlets of TOP-20 Pharmacy Chains



Aptechnye Traditsii will continue to expand in priority regions, including Kursk and the Volga region. For example, Aptechnye Traditsii pharmacies will start operating in Ulyanovsk Region, about one hundred pharmacies are planned to open under the Sotsialochka brand. Aptechnye Traditsii raised money to expand its chain in Ulyanovsk Region by selling its outlets in Central Russian cities to the pharmacy chain Pharmaimpex (64 pharmacies).

Tula's pharmacy chain Zdes Apteka, which is also a member of the IRIS partnership, has acquired the pharmacy chain Vek Zhivi (67 pharmacies in Moscow).

The IRIS partnership sees its development in attracting new players. For this purpose, the company has lowered its membership requirements: now it can be joined by chains with a turnover of 1 billion roubles a year and with the possibility of buying out 1% of the share. The first chain that joined IRIS under the new conditions in November 2021 was Astrakhan's pharmacy chain Shakh, which includes 110 pharmacies. Therefore, IRIS' turnover for last year is shown without the chain Shakh.

We would like to conclude our review with some good news. The simplified system for monitoring the movement of drugs (SMDLP), which was in effect until February 1 of this year, has now become permanent. Appropriate changes were made to Decree No. 1556, it was signed on January 31, 2022. The document allows pharmacies and medical institutions to withdraw drugs from circulation through the cash registers and withdrawal registers immediately after the system notification about the drugs they received, that is, they do not need to wait for confirmation from the system that the acceptance information has been successfully registered. The information is automatically confirmed by the labeling system itself. Thus, the recipients of drugs do not depend on errors or delays of the suppliers.

Table 26

Ranking of Pharmacy Associations by Sales Turnover in 2021

Ranking	Pharmacy chains	Volume, in billion roubles	Share in commercial segment, 2021	Turnover increase compared to 2020	Number of outlets
1	ASNA	203.0	13.9%	0.0%	15 963
2	Rigla	112.6	7.7%	19.3%	3 396
3	United AS ERKAFARM and MELODIYA ZDOROVYA	89.0	6.1%	-4.4%	1 815
4	April	78.3	5.4%	50.3%	3 069
5	IRIS	70.3	4.8%	8.0%	2 765
6	Neo-pharm	56.9	3.9%	10.5%	1 003
7	Pharmacy chain 36.6	53.1	3.6%	12.1%	1 616
8	Implosia	52.5	3.6%	3.7%	3 631
9	Planeta Zdorovya	51.3	3.5%	4.0%	2 127
10	Vita	49.1	3.4%	4.9%	2 072
11	Pharmland	45.2	3.1%	27.4%	1 545
12	Maxavit	22.3	1.5%	5.9%	735
13	E-apteka	17.9	1.2%	62.5%	200
14	Zdorov.ru	17.6	1.2%	9.2%	94
15	Pharmaceut+	17.2	1.2%	9.0%	568
16	Apteka-Timer	15.6	1.1%	-20.0%	808
17	Apteka Nevis	14.3	1.0%	9.4%	594
18	Gubernskiye apteki	14.2	1.0%	11.7%	367
19	Magnit	13.5	0.9%	0.5%	835
20	Aloe	12.0	0.8%	62.1%	467
21	IDEA	11.0	0.8%	1.5%	316
22	Monastyrev.rf	8.9	0.6%	21.3%	110
23	Zdorovye (Ust'-Labinsk)	8.5	0.6%	4.4%	180
24	Nadezhda-Pharm	7.0	0.5%	18.8%	335
25	Peterburgskiye apteki	6.9	0.5%	3.0%	83

Ranking	Pharmacy chains	Volume, in billion roubles	Share in commercial segment, 2021	Turnover increase compared to 2020	Number of outlets
26	Edelweiss	6.9	0.5%	10.3%	235
27	Antey	6.7	0.5%	-2.8%	574
28	Pharmeconom	6.2	0.4%	-4.2%	159
29	Volgopharm	5.6	0.4%	0.2%	153
30	Garmoniya zdorovya	5.0	0.3%	16.5%	186
31	Vasha No. 1	4.8	0.3%	36.0%	70
32	Aliya-Pharm	4.8	0.3%	17.3%	191
33	Aptechnye traditsii	4.8	0.3%	-8.9%	181
34	Nizhegorodskaya Oblastnaya Pharmatsiya	4.7	0.3%	19.4%	252
35	Sovetskaya Apteka	4.5	0.3%	18.0%	365
36	Vita-plus	4.2	0.3%	43.4%	228
37	Arbik	3.5	0.2%	28.5%	164
38	Gran (Simferopol)	3.5	0.2%	18.0%	111
39	Trika (Moscow)	3.4	0.2%	11.0%	56
40	Dialog	3.3	0.2%	-5.0%	72
41	Serdtse Rossii	3.2	0.2%	1.0%	194
42	O'Vita	3.1	0.2%	6.0%	103
43	Pharmiya	3.0	0.2%	22.4%	176
44	MFK Severo-Zapad	2.9	0.2%	15.0%	100
45	Vitapharm (Moscow)	2.7	0.2%	5.0%	40
46	Lucky-Pharma	2.6	0.2%	21.0%	162
47	Orenlek	2.6	0.2%	13.0%	137
48	Apteka25.rf	2.3	0.2%	17.1%	24
49	Deshevaya Apteka	2.2	0.2%	-12.0%	79
50	Mir Lekarstv	2.1	0.1%	13.7%	141

Table 27

Ranking of Marketing Associations by Sales Turnover in 2021

Ranking	Marketing Association	Volume, in billionroubles	Share in commercial segment, 2021	Turnover increase compared to 2020	Number of outlets
1	ProApteka	**147.1**	**10.1%**	**24.5%**	**8 932**
2	MFO	**99.5**	**6.8%**	**7.7%**	**5 581**
3	Sozvezdiye	**92.4**	**6.3%**	**48.2%**	**4 984**
4	Vesna	**22.3**	**1.5%**	**1.6%**	**1 681**

8. Distributors

Strange as it may seem but the pandemic that has significantly changed the market structure has not increased the consumption in packages. It means that the logistics load on wholesalers as the main link in Russia between producers and pharmacies or hospitals has varied little, if at all. Of course, distributors had to deal with shortages emerging in certain subjects of the Russian Federation and to re-distribute the product range among the regions. Still, the segment was mainly driven and affected by non-Covid-specific factors.

On the whole, under-performance of the pharmacy market stifles the growth of the largest pharmaceutical distributors. A stronger involvement in the public segment in 2021, on the contrary, contributes to potentially higher performance. In this context, the position of wholesalers on the market can change significantly.

The competition for profitability in the distributor segment has become much stronger in the recent years. What explains it is the changing market situation and the desire of other supply chain participants to take hold of the profit distribution processes. Direct contracts between the producer and the pharmacy chain is an example of this. Certainly, producers prefer to work with large chains, and this is one of the market trends (on the one hand, the concentration of traditional pharmacy players is growing, on the other hand, pharmacy associations that aggregate small and medium-size retail segments are rapidly developing). Pharmacy associations are also interested in disengaging from the distribution chain or in dealing with one wholesaler only. This format helps to reduce costs, excluding several logistics steps from the supply chain.

The shift towards direct contracts has been observed already for a number of years, so far without any snowball effect though. Logistics operators, for example, Santens, made some effort to promote direct contracts. Yet, it looks like both pharmacies and producers are likely to opt for the formats reducing the number of distribution chain participants. It is in line also with the drugs labelling initiative that is supposed to prevent pharmacy chains from getting wholesale market bonuses.

At the same time, the public procurement segment can choose direct communications schemes. But this is getting more and more relevant for large producers. After all, should an overall bidding ranking of suppliers (winning bidders) exist, 5 producers, some of which even ranking high, will be in the top 50. For example, in the 2021 ranking Pharmstandard ranks 2nd, only 20% behind the leader. Among large production companies playing a lone hand in tendering are GlaxoSmithKline with a 2.3% share and Biocad with a 1.3% share.

State regulation does not frequently interfere with the wholesale segment but can have its effect on the ultimate financial performance in terms of pricing. The main tool is regulating prices for VEDs, specifically, setting maximum retail and wholesale markups. Variances in these parameters are less frequent than in the registration prices for drugs. Yet, in 2021 they changed, too. The maximum wholesale markups on prices for drugs were reduced in Moscow on average by 3.7%. A respective resolution of the Moscow City Government took effect as from 1 November 2021. Till the end of the year, wholesale markups were revised in 24 other regions of the Russian Federation. This is, by the by, one of the factors that drove down the ultimate prices for customers and also the inflation on drugs in 2022.

In the current market situation, stability of operations in the wholesale segment remains the decisive factor in the provision of drugs. In 2021, the Russian pharmaceutical market in distributor prices was worth 1,979 billion roubles, which is 14.5% more than in 2020. At the end of 2021, the 10 largest distributors on the pharmaceutical market accounted in the aggregate for 72.7%, which is 1.4% lower than in 2020. The decreasing concentration on the pharmaceutical market is due to the high dynamics in the public procurement segment, the appearance of new bidders as well as high the intense growth of the existing ones.

Over the recent years, the allocations of funds for the existing programs (the national cancer and heart disease project, in the first place) as well as on new projects (in 2021, the "Krug Dobra" ("Circle of Kindness") initiative for support of children with rare and orphan diseases received separate funding) have been growing. Another driver for the growth of public procurement distributors was, of course, supply of hospitals with drugs to treat the coronavirus infection.

If we compare the top 5 distributors in the commercial segment of the market, the average growth is at 8%, for the public segment the top 5 distributors are growing on average by 33%. Let us note that only one company, Protek, can be found in both of these rankings (top 5), the other companies in the top 5 are different. Protek is one of the few companies that focus mainly on the pharmacy channels but, at the same time, have a distinct share in the public tenders for drugs (around 10% of the overall gross turnovers). By contrast, Pulse and Katren hold around 1% of their total sales on the public market.

These trends were reflected in the distributor ranking. Even the top 3 distributors changed. The rankings of pharmacies and producers do not vary much (at least, for a long period of time until 2021), whereas in the wholesale segment the competition over the first place never ends.

At the end of 2021, Pulse maintained its leadership first gained by it in 2020. The company's growth rates are one of the highest among the top 10 companies in the pharmacy segment.

Figure 47

Concentration in the Distribution Segment

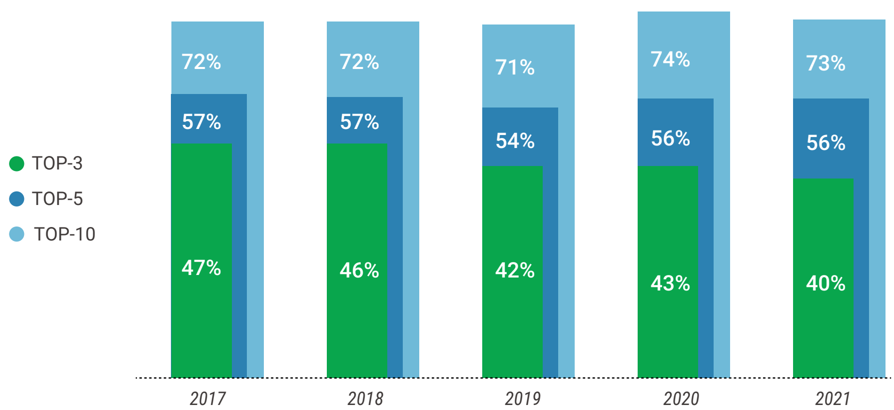


Table 28

TOP 25 distributors on the pharmaceutical market, 2021

Note: *sales volumes are given in purchase prices inclusive of VAT (including sales volumes in the pharmacy segment and non-drugs; public procurement - drugs only)*

Ranking	Distributor	Volume, in billion roubles	Increase	Share
1	Puls	**291.0**	**14.0%**	**14.7%**
2	Protek	**257.2**	**7.5%**	**13.0%**
3	Katren	**249.1**	**3.2%**	**12.6%**
4	R-Pharm	**200.7**	**51.3%**	**10.1%**
5	Grand Capital	**111.3**	**17.4%**	**5.6%**
6	Pharmcomplect	**98.1**	**-8.1%**	**5.0%**
7	BSS	**76.7**	**15.3%**	**3.9%**
8	Profit-med	**58.9**	**3.4%**	**3.0%**
9	Irwin 2	**49.6**	**56.0%**	**2.5%**
10	«Asfadis» Association	**45.7**	**5.9%**	**2.3%**
11	Pharmimex	**44.5**	**22.6%**	**2.2%**
12	Avesta Pharmaceuticals	**41.4**	**12.3%**	**2.1%**
13	Lancet	**39.3**	**2.3%**	**2.0%**
14	Agroresursy	**33.7**	**8.6%**	**1.7%**
15	G.D.P.	**33.2**	**-9.3%**	**1.7%**
16	Magnit	**23.7**	**-28.7%**	**1.2%**
17	ZdravServis	**20.9**	**5.8%**	**1.1%**
18	Euroservice GC	**19.1**	**18.0%**	**1.0%**
19	Biotec	**17.4**	**-57.7%**	**0.9%**
20	Severo-Zapad	**12.6**	**9.6%**	**0.6%**
21	Medipal-onko	**12.5**	**3.3%**	**0.6%**
22	Primapharm	**12.1**	**124.1%**	**0.6%**
23	Pharmstor	**9.6**	**-22.4%**	**0.5%**
24	Medintorg	**9.0**	**23.7%**	**0.5%**
25	Pharmservice	**7.9**	**new**	**0.4%**

It helped the distributor not only to keep its leading position but also to increase its share on the pharmacy market (at the end of 2021 – 23.9%, against around 21.7% in 2020). The distributor has not yet taken a strong hold of the «promising» market for public procurement, but puts on this direction and has ambitions to develop the public procurement segment.

As part of the continuous modernization of the warehouse facilities, Pulse launched in Yekaterinburg a new automated conveyor line for order batching, which supports, inter alia, 3PL order handling services. The number of clients requesting these services is increasing, and expanding their scope is strategically important for Pulse. At the same time, one of the constraints for the project development is labelling. One the one hand, formally, 3PL operators are not economic agents involved in the circulation of drugs, by definition they offer outsourced warehousing and logistics functions. At the same time, they are partly in charge of some of business processes of producers, importers and distributors, i.e. entities that are economic agents and are required to report to the State Information System for the Monitoring of Movements of Medicinal Products. That is why, for the system to be implemented in the distributor operations, software needs to be modified to be adapted to appropriate protocols and standards.

In 2021, Pulse celebrated its 25th anniversary. The company's history dates back to 1996; it has intensively grown in the last ten years thanks to its regional expansion to become the market leader.

The second-ranking distributor in 2021 is Katren that moved up one position line: the distributor's turnovers grew by 7.5%. Katren is the only company in the ranking that is international (it has representative offices in CIS countries) and is rated by an international rating agency. In 2021, S&P Global Ratings affirmed in its report Katren's BB-/B rating, Outlook Stable.

The key event for the industry in 2021 was the acquisition by Katren of 50.01% of shares of one of the largest pharmacy chains, Erkapharm GC (Doctor Stoletov, Samson-Pharma, Ozerki brands). Apart from the fact that this is the biggest deal on the market over the last few years, it has been authorized by FAS (the Federal Antimonopoly Service) subject to restrictions that earlier did not apply to the pharmacy market. For the maintenance of competition, the agency demanded that prior to the date of the deal the number of pharmacies owned by the parties to the deal in the Oryol Oblast be reduced, and also prohibited them to open new pharmacies in Saint Petersburg during 3 years.

Before that, Katren already had its own retail channel – the Melodiya Zdorovya pharmacy chain, and is intensively promoting Apteka.ru online resource. The deal will help the distributor to consolidate its position on the market at the time it is contracting and to increase the number of its online service outlets. In line with this strategy, some of Erkapharm's points of sale have already been marked with the Apteka.ru signboards.

Apteka.ru is one of the best known pharmacy product booking platforms, which has long been advancing and accounts for a significant share in its segment. Interestingly, Katren does not own the Apteka.ru trademark. It applied for its registration, but Rospatent (the Federal Agency for Intellectual Property, Patents and Trademarks) rejected the application. The agency's expert examination established that the proposed combination consists of unprotected verbal elements only, and such elements may be used by any company elsewhere.

In 2021, Protek ranked 3rd, with a 12.6% share. The company showed a 3.2% increase in sales.

The wholesale segment is only part of the big group of companies. Cumulatively, Protek GC is the largest pharmaceutical company ranking 54th among Russia's largest companies according to Expert-400. By the end of 2020, the company had strengthened its position by moving up five position lines in comparison with the previous year (the 59th position). According to RAEX-600, the company ranks 52nd among Russia's largest companies.

The company continues developing in all directions. In July 2021, it started the construction of a new complex in the logistics park near Moscow. The total complex area will be over 61 thousand sq. m., warehouse facilities will cover more than 58 thousand sq. m., the pallet capacity of production areas will be over 66 thousand. Commercial activities are expected to be launched in 2023.

Expansion of the company's logistics capacities will lay the ground for intensive e-commerce development. Now, the company is actively promoting its own Internet project – ZdravCity. ZdravCity covers 81 regions of Russia, by uniting over 19.5 thousand partner pharmacies. Among the project partners are Sber ecosystem companies, Yandex, and Mail.Ru Group. Already in the autumn 2020, Protek started opening dark stores (specialized warehouse facilities to cater to the e-commerce segment) at the premises of the Rigla pharmacy chain, the Group's retail segment. At the end of 2021, it had already 57 dark stores in 34 regions of Russia. The purpose of a dark store is to provide for the express delivery of online orders to the end customer and to promptly supply pharmacies that are ZdravCity's partners with rare SKUs. The product range of one dark store is 2.5-3 times wider than that of an ordinary pharmacy.

Among the companies focused mainly on working with pharmacies, worth mentioning are Grand Capital (+1 position line, ranks 4th), and Avesta (+2 position lines, ranks 8th). As a result, in the pharmacy segment rating the distributors rank higher than on the market in general. In the overall rating, Grand Capital ranks fifth, and Avesta is not even in the top 10.

Worthy of particular mention are the companies that focus their efforts on the public sector rating.

The first among classical distributors in the public segment (excluding producers also winning in and supplying under tenders) is R-Pharm. The company's total turnovers are worth 200.7 billion roubles, 57% of which are budget-funded.

Besides distribution, R-Pharm is actively developing the production segment, having expanded its capacity by acquiring the Teva pharmaceutical plant in the territory of the Yaroslavl Industrial Park (Novosyolki). In 2021, the company was one of those producing Covid-19 vaccines. The company's plants are currently producing three vaccines – Sputnik V, Sputnik Light, and AstraZeneca. The vaccines are being produced by R-Pharm at the group's plants in Yaroslavl, and at the production facilities built in SEZ Technopolis Moscow. The total investments in the production of the vaccines already exceeded $500 million.

The production facilities are being expanded also on account of foreign sites. R-Pharm Germany (incorporated in R-Pharm Group) got an investment loan from Raiffeisenbank to launch the production of various biopharmaceuticals, including coronavirus infection vaccines and drugs on the basis of monoclonal antibodies, at the company's plant in Illertissen. The production is expected to be launched in January 2022.

The ranking comprises companies that operate on the public market and, in addition, have a narrow area of focus. 75% of the portfolio of Irwin

Table 29

Top 10 distributors by segments

	Pharmacy segment		Public procurement	
Ranking	Distributor	Share	Distributor	Share
1	Puls	**23,9%**	R-Pharm	**13,9%**
2	Katren	**21,4%**	Irwin 2	**5,9%**
3	Protek	**18,3%**	Pharmimex	**5,2%**
4	Grand Capital	**8,9%**	G.D.P.	**3,8%**
5	Pharmcomplect	**7,9%**	Protek	**3,0%**
6	Profit-med	**4,9%**	Lancet	**2,6%**
7	BSS	**3,5%**	BSS	**1,7%**
8	Avesta Pharmaceuticals	**3,0%**	Medipal-onko	**1,5%**
9	Agroresursy	**2,9%**	Severo-Zapad	**1,5%**
10	«Asfadis» Association	**2,9%**	Primapharm	**1,5%**

2 are in the segment of oncology or cardiology. It was one of the companies to demonstrate the highest growth rates, and for this reason the company found itself in the top 10 distributors and ranked 9th (in 2020, it ranked 16th). In the public procurement segment, Irwin 2 moved from the 4th to the 2nd position line. One of the factors accounting for its growth was that the company became one of the suppliers under the new national programme "Krug Dobra" ("Circle of Kindness"). For that to happen, PharmEco LLC (in which Irwin 2 is incorporated) acquired a 32% share in FarmaMondo LLC. FarmaMondo S.A. (Switzerland) has been a major supplier of drugs worldwide for over a century. Among FarmaMondo's partners are foreign bio-tech production companies that are not present on the Russian market. One of the company's core services is supply of unregistered drugs.

Companies such as Medipal-Onco, Pharmstore and Primapharm also have a narrow area of focus. Their performance and ranking are directly conditioned on state orders and implemented programmes.

GDP has practically left the retail market to fully focus on state orders. As a result, the company grew on the public procurement market by 42% to rank 4th (at the end of 2020, the company ranked 6th). GDP is the former distribution unit of 36.6 Pharmacy Chain, it started working independently from 2021.

Diversification of distributors is an established market trend. Some focus on the production segment, some opt for retailing, others manage to perform well in all segments. Probably, only extremely specialized companies that focus their operations in the public procurement segment remain wholesale drug suppliers. In 2021, there were several noteworthy projects on the diversification into the adjacent markets.

In January 2021, BSS became the owner of 60% in BSS Food LLC. The company will set about developing a new area for the group – supplies of baby and medical food, including specialized food for infants with health problems. In the recent years, BSS has been extending business areas. In 2020, it established a separate unit for the distribution of aesthetic medicine and cosmetic products – BSS Cosmetics, and a unit for supplies of implants and post-surgery garments – BSS Aesthetics. Later, the holding company announced the establishment of BSS-Lab to supply reagents for laboratory research in immunochemistry, biochemistry, hematology, hemostasis, urine analysis, as well as products for microbiological laboratories.

Several distributors started approaching the market for medical services. Euroservice invested in the oncological centre in Tula (a medical centre with an area of 350 sq. m., with a diagnostic unit and a day patient department for 10 beds). The Atlas medical centre, 99.9% in which belong from June 2020 to Protek, intends to open a chain of clinics in Moscow. Investments in the project are estimated at 3 billion roubles, the chain will be built along the development of Protek PJSC Medicine Segment. R-Pharm entered the public procurement market by leasing medical equipment through its own company R Pharm Medical Systems.

9. Production

Amid the continuing pandemic of the coronavirus infection, one of the crucial topics of 2021 was the development and production of Covid-19 vaccines. Russia has registered the following vaccines: Sputnik V (August 2020), Epivaccorona (October 2020), Covivac (February 2021), and Sputnik Light (May 2021). Altogether, the domestic market saw around 140 million vaccine doses to fully vaccinate over 73 million Russians (as at the end of December). Part of the produced vaccines are exported. All in all, in 2021 Russia supplied around 233 million doses on the domestic and international markets, that is, around 93 million doses were exported. As a result, Russia ranks fifth worldwide in the production and export of the coronavirus vaccines. Yet, Russia accounts only for 2.6% in the global exports of the Covid-19 vaccines. The leader is China holding 41% of the global supply; then comes the European Union with a 37% share; the third-ranking is the USA (9.5%).

In terms of the vaccines, the global leader is Chinese Sinovac (around 2.37 billion doses at the beginning of December), followed by European AstraZeneca (2.26 billion doses) and another Chinese vaccine Sinopharm (almost 2.1 billion doses) (according to the data of the World Trade Organization).

Though Russia has registered several vaccines, only one of them, Sputnik V, is being exported globally. Sputnik V ranks second by the number of approvals/authorizations in various countries. As at January 16, 2022, the vaccine was approved for use by the state regulators in 71 countries. In this context, the Russian Direct Investment Fund is currently applying much effort to launch the production of the vaccine in the territory of other countries (such as China, India, and Hungary).

In Russia, Sputnik V is being produced on seven sites: Medgamal branch of the Gamaleya National Research Centre for Epidemiology and Microbiology, Binnopharm JSC, R-Pharm JSC, Biocad CJSC, Generium JSC, Lekko CJSC, and Pharmstandard-UfaVITA OJSC. Epivaccorona is produced at the Geropharm plant. Covivac is released by the vaccine developer, the Chumakov Centre, and, from the end of 2021, also by biopharmaceutical company Nanolek.

As at the beginning of 2022, only domestically made vaccines were approved for use in Russia. At the same time, Russia is considering two applications from foreign producers of the coronavirus vaccines. Applications for registration has been filed by AstraZeneca and by a Chinese firm (probably, CanSino Biologics that has developed single-dose AD5-nCoV (Convidecia)). If the vaccine is approved for use, its producer in Russia can be Petrovax. R-Pharm has already started the production of the coronavirus vaccine under the license of the Oxford University and AstraZeneca. The vaccine produced by R-Pharm will be fully for export.

It must be said that the pandemic of Covid-19 has not had any major impact on the development prospects of the Russian producers. One of the development priorities in this agenda is Pharma-2030 Strategy. The strategy developed for the next decade envisages a shift in the focus of the pharmaceutical industry towards localization of the production of substances and full-cycle release of pharmaceuticals.

The first year of the pandemic revealed Russia's heavy dependence on the imports of pharmaceutical substances and highlighted several problems domestic producers are likely to face. Increasing the local substance production content is a priority.

Today, domestically produced drugs are mainly made of imported substances. Substances for 81 INNs out of 215 INNs from the list of strategically important drugs are not produced in the territory of the Russian Federation, and for 32 INNs there are no facilities even for the production of finished dosage forms. Moreover, even those INNs, for which Russia produces API, are not fully made of domestically-produced substances. In most cases, a company specializing in the production of drugs produces substances only for its own needs. Of 215 INNs, API are imported for 117 INNs. By 2024–2025, 65% of 215 INNs are envisaged to be fully produced in Russia; the target figure for 2030 is 80%.

To encourage API production, it is proposed to review the preferences in the public procurement of drugs and to prioritize those produced under a full cycle, by converting the "two's company, three's none" principle into "one's company, two's none". Then, where drugs produced from substance to finished product are offered for tendering, all other offers will be rejected.

As a result, several projects related to production sites that have been announced or launched in 2021 are targeted at releasing active pharmaceutical ingredients.

Several new projects emerged in 2021 regarding localization of foreign producers in Russia:

- In April 2021, Takeda (Japan) localized at its plant in Yaroslavl the production of innovative Ninlaro (INN-Ixazomib) used in the treatment of multiple myeloma (the drug is classified as an orphan drug and is on the VED list). Investments in the localization in Russia of the finished dosage form production totalled 590 million roubles. Now, the Japanese corporation is looking into localizing 3 other drugs – their production can be launched any time soon, more projects are being considered.

- The biopharmaceutical company AbbVie and R-Pharm Group completed transfer of the technologies for the deep localization of the production of Sevoflurane, an inhalation anesthetic. The drug will be produced at R-Pharm's facilities from the substance supplied by AbbVie. The commercial production of the drug fully localized in Russia was launched in the second quarter of 2021, the output will come to 200 thousand vials a year.

- Abbott opened a new research-and-technology production centre at the premises of the production site of Veropharm (Abbott Group) in Belgorod. The centre will accelerate the transfer of production technologies, the localization of the company's international portfolio, and the development and release of new drugs on the Russian market.

- Sanofi and Nanolek agreed to localize the production of the meningococcal vaccine Menactra. The vaccine will be produced at the Nanolek plant in the Kirov Oblast. According to the output plan, the first batches are expected as early as 2022. It is scheduled to produce 2.2 – 3.5 million doses a year, this amount will be sufficient to fully meet the need of the Russian healthcare system for this vaccine.

Table 30

Key production sites launched on the Russian pharmaceutical market in 2021

Initiator	Region	Description	Capacity	Investments
Biokhimik JSC (incorporated in Promomed)	Saransk	A newly opened ampoule production unit. The newly opened line for the production of in-demand drugs such as Meloxicam, Drotaverine, Ketoprofen, Papaverine, and others. The unit will produce also anticoagulants used in the treatment of the novel coronavirus infection: Enoxaparin sodium and Nadroparin calcium	The newly opened line will increase the output of finished pharmaceutical products in ampoules two-fold - to 15 million units a month (over 173 million ampoules a year)	
Grotex LLC (Solopharm)	Saint Petersburg	A newly opened industrial site - full-cycle biotechnological production of drugs in ampoules for the treatment of cancer, autoimmune and ophthalmic diseases		1.1 billion roubles
Sputnik Technopolis LLC (R-Pharm JSC)	SEZ Technopolis Moscow, Moscow	Production of Sputnik V, a Russian coronavirus vaccine, on a new site	Up to 10 million doses of the vaccine a month	Over 10 billion roubles from the Moscow City Government, R-Pharm and the Russian Direct Investment Fund (RDIF) will invest 4 billion roubles
Pharmasyntez JSC	Irkutsk	A newly opened production line - granulation for the large-scale production of solid dosage forms for socially significant diseases (HIV, TB, etc.). The first drug to be produced on the new site will be Merifatin to treat type 2 diabetes	1 million tablets per hour	
Pharmasyntez JSC	Irkutsk	Newly opened large-capacity facilities for the production of antibiotics and antivirals in solid, liophilized and injectable dosage forms, including Remdeform (INN Remdesivir), a novel drug to treat the coronavirus infection	4 billion tables and 18 million vials, of which over 13 million are solutions, concentrates and emulsions; 5 million lyophilisates a year for solutions for infusion	Over 1 billion roubles
Pharmasyntez JSC	Tyumen Oblast	Large-scale production of drugs for the treatment of heart diseases, more than 30 drug names, the production capacity will cover 20% of Russia's needs		4 billion roubles

Initiator	Region	Description	Capacity	Investments
Ozon Pharm LLC	SEZ Togliatti, Samara Oblast	A second drug production line. The newly opened line will produce 17 drugs, most of which are on the VED list, including Areplivir, a drug to treat coronavirus patients	Up to 275 thousand packages a day	Over 3 billion roubles
R-Pharm JSC	Moscow	The Industrial Development Fund (VEB. RF) and R-Opra LLC (incorporated in R-Pharm) signed a loan agreement for the construction of new pharmaceutical facilities for the localization of foreign-made drugs. The output will be drugs for the treatment of oncological, respiratory, rheumatic, neurological, kidney, cardio-vascular, orphan diseases, HIV, and also immunosuppressants		A 2 billion roubles loan The total project budget is 7.4 billion roubles
Nanolek	Kirov Oblast	Nanolek has started producing CoviVac, the coronavirus vaccine developed by the Chumakov Centre, RAS	Up to 1 million doses a month	40 million roubles
Binnopharm Group	Obolensk, Moscow Oblast	Production of the linezolid substance used in the production of antibiotic Linezolid in pills		
Pharm Aid Ltd.	Kaluga Oblast	Rostec, RUSNANO and Ishvan Pharmaceutical, UAE, will build a production complex for the production of live and inactivated vaccines. At phase one, the complex will produce vaccines against the rotavirus infection and chicken pox	By 2025, the new complex's capacity will be 4 million doses a year, and over 8 million doses by 2026	
Renewal (PFK Obnovlenie)	Suzun, Novosibirsk Oblast	Continuous full-scale production of semi-solids (ointments, gels, liniments)	Over 18 million packages a year	Around 400 million roubles
STADA Nizhpharm	Nizhny Novgorod	A new unit for the preparation of substances		Over 2 million euros
B. Braun Melsungen AG (Germany)	Tver	Construction of a production and logistics complex with a phased commissioning of facilities for the production of medical products, suture materials, orthopedic implants, and desinfectants		3 billion roubles
Active Component JSC	Pushkin, Leningrad Oblast	Second phase construction of the plant for the production of active pharmaceutical ingredients (API) for antineoplastic drugs	up to 100 tons a year	around 3 billion roubles

- Gedeon Richter launched at its own Yegoryevsk plant the production of Cariprazine used to treat patients with schizophrenia and bipolar disorder.

- R-Pharm Group and Beijing Health Guard Biotechnology (China) signed a license agreement on the development and commercialization in Russia of a nonavalent human papillomavirus (HPV) vaccine. The agreement envisages phase III clinical studies, the registration of the vaccine in Russia, and localization of the production of the finished dosage form at R-Pharm's plant in Yaroslavl. In March 2021, the Russian Government put the HPV vaccine on the national development strategy for the immunoprophylaxis of infectious diseases through to 2035. In 2024, it is planned to put HPV vaccines also on the National Preventive Vaccination Schedule.

Another mechanism available for the support and development of the production of own substances in the territory of Russia is Special Investment Contract (SPIC). At the end of 2020, the list of modern technologies, on the basis of which SPICs can be concluded, was updated. The list covered more than 600 strategic areas in a variety of industries, including chemical and pharmaceutical segments involving the production of new drugs and pharmaceutical substances that have no equals in Russia.

At the moment, a SPIC for substance production was made only with Active Component in 2020. One SPIC for finished drug production was made in 2021. Skopinpharm, incorporated in Pharmimex, signed with the Ministry of Industry and Trade of Russia and the Ryazan Oblast a SPIC on the integration of technologies for the production of dosage forms of protein kinase inhibitors and for the manufacturing of tissue imaging equipment for the diagnosis of oncological and sentinel lymph node diseases. This is the first so-called SPIC 2.0, a special investment contract with updated criteria and requirements. The estimated investments are worth 3.6 billion roubles. The project suggests establishing the production of six drugs for oncological and hematologic diseases, five of which have no equals in Russia.

Every year, the number of localization and domestic production expansion projects is increasing, but the share of the drugs made in Russia is decelerating in growth; moreover, in 2021, negative dynamics were observed in packages. This is due to the dependence of the market on innovative drugs. Extra funding of purchases increases the share of imported drugs. The share of localized drugs has been recently growing on account of domestic producers that get extensively involved in the import substitution process and are launching on the Russian generic market high-cost original drugs that cease to be under patent protection.

In 2021, the results of the national programme on the development of the pharmaceutical and medical industry were analyzed. By the end of 2020, the targets were completed less than by 50%: 10 out of 24 indicators failed to be achieved (41.7%). One of the sub-programmes that failed to be implemented concerned the development of the production of drugs and envisaged domestic performance targets. It is worth mentioning that the programme was approved as far back as 2014. Its implementation deadlines were extended several times. In 2018, the government started elaborating a revised version of the programme through to 2030. As before, the key objective is to head for the development and production of domestic innovative products and for the import independence.

At the end of 2021, localized drugs accounted for 45% in value. For the original drugs, this figure was almost half as high, 26% only. It must be said though that such a small share is mainly due to the fact that so far the domestic producers offer few original drugs – in this segment Russian companies account only for 13%.

The structure of localized drugs is shifting in favour of domestic producers. In 2018, Russian companies made for around 30%, and in 2021 – already for around 36%; yet, localized drugs accounted for a smaller share in the sales structure for the same period, having dropped from 13% to 9%.

At the end of the year, imported drugs accounted for 55% in money (-1.4% to 2020), and for 32.7% in packages (+0.8% to 2020).

Covid-19 had but a minor impact on the sales structure by the extent of localization; more influence it had on the ranking of and growth rates among producers. Those companies whose product mix portfolios offered a higher share of products recommended for the treatment of the coronavirus infection were at an advantage. In consequence, in 2021 one of the most stable rankings (producer ranking) changed drastically. Even the top three positions changed.

In 2021, the top 20 producers held in aggregate a 46.0% share. The 2021 ranking is characterized by numerous shifts. Only 3 companies retained their positions compared with 2020. 2 “new” companies can be seen in the ranking: Russian R-Pharm and Pharmasyntez. Now, there are four Russian producers in the top 20.

The first-ranking at the end of 2021 is Bayer (+2 position lines), with a 18.9% growth in sales against 2020. This growth is on account of a high share in the company’s portfolio of drugs recommended for the treatment of Covid-19 – around 35%, namely, Xarelto. Also the share of the public segment in the company’s sales grew notably – from 23% to 34%.

As before, second comes Novartis, with a 3.5% share. The company’s high share is on account of its pharmacy sales (62%). At the same time, its growth dynamics are not very high, only around 5%, because there are no drugs for the

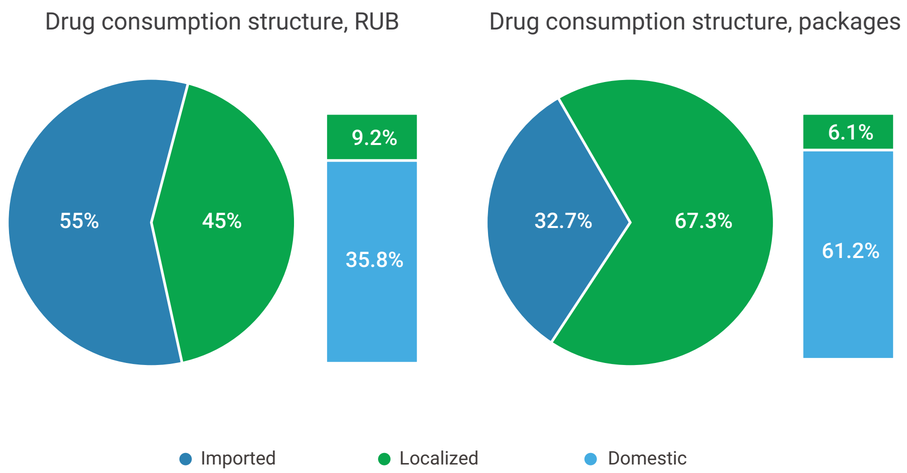


Figure 48

Consumption structure by origin, 2021

Table 31

Top 20 producers by sales volumes on the Russian pharmaceutical market in 2021

Ranking	Change to 2020	Producer	Value, mln roubles	Value growth	Share
1	+2	BAYER	**79,509.0**	**18.9%**	**4.0%**
2	0	NOVARTIS	**70,890.0**	**5.2%**	**3.5%**
3	-2	SANOFI	**67,712.8**	**-11.7%**	**3.4%**
4	0	OTCPharm	**55,326.9**	**11.1%**	**2.8%**
5	+6	PFIZER	**52,838.4**	**38.2%**	**2.6%**
6	-1	GLAXOSMITHKLINE	**52,468.2**	**9.3%**	**2.6%**
7	-1	JOHNSON & JOHNSON	**49,750.0**	**3.9%**	**2.5%**
8	+6	BIOCAD	**45,451.6**	**34.9%**	**2.3%**
9	-1	STADA	**42,678.2**	**-0.7%**	**2.1%**
10	-1	ABBOTT	**42,603.8**	**4.9%**	**2.1%**
11	+5	F.HOFFMANN-LA ROCHE	**40,805.1**	**24.2%**	**2.0%**
12	-2	TEVA	**40,387.2**	**0.4%**	**2.0%**
13	+4	ASTRAZENECA	**39,822.6**	**21.9%**	**2.0%**
14	-7	MERCK	**37,753.1**	**-12.3%**	**1.9%**
15	+63	R-PHARM	**34,862.2**	**703.0%**	**1.7%**
16	-3	SERVIER	**34,622.6**	**-2.2%**	**1.7%**
17	-5	BRISTOL-MYERS SQUIBB	**34,246.2**	**-9.2%**	**1.7%**
18	0	A. MENARINI	**33,918.6**	**8.8%**	**1.7%**
19	+9	PHARMASYNTEZ	**33,073.6**	**59.4%**	**1.6%**
20	-5	KRKA	**33,070.1**	**0.6%**	**1.6%**

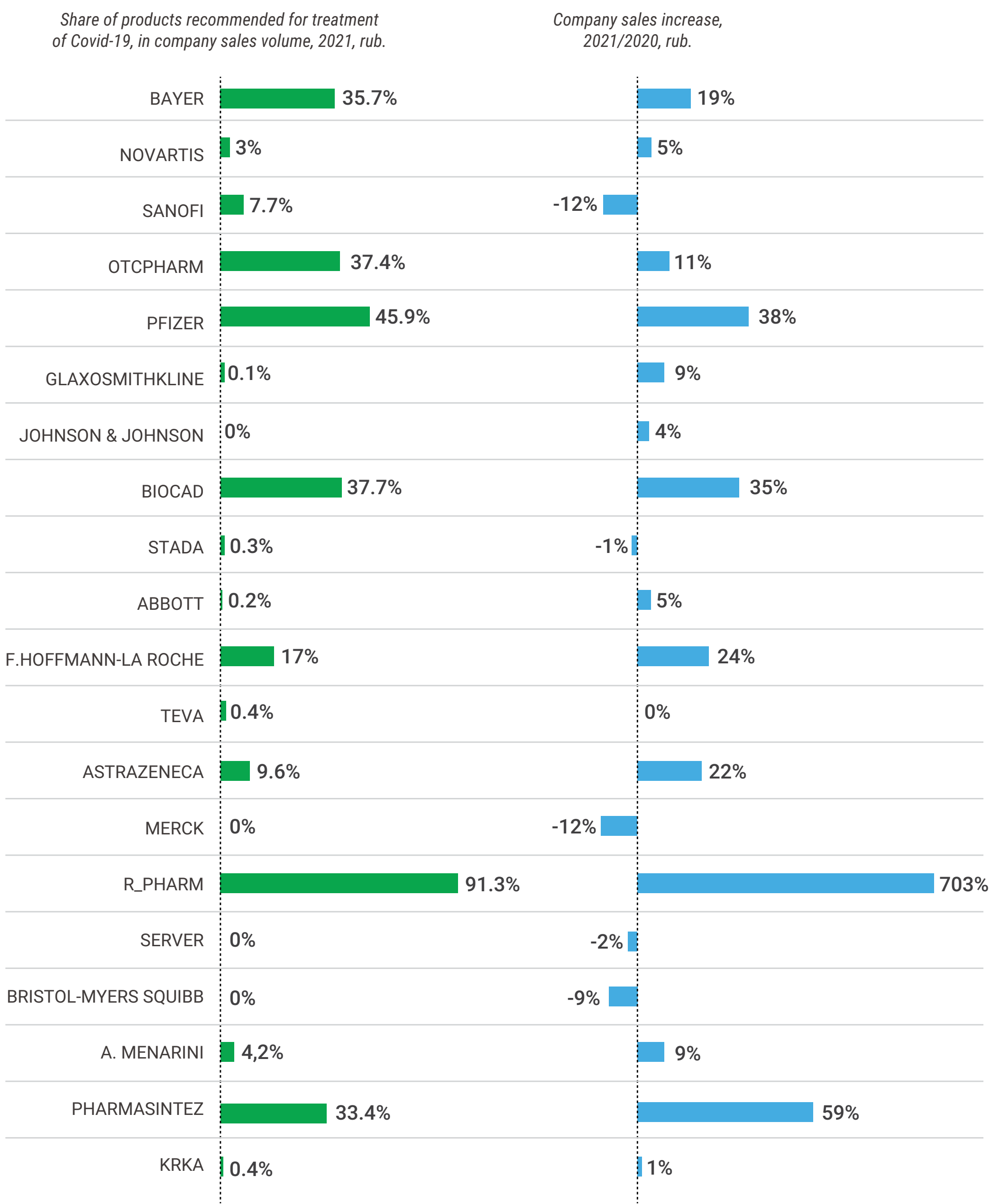
treatment of the coronavirus infection in the company's portfolio.

Sanofi is one of the few companies that went negative compared with 2020. As a result, it lost its leadership and moved down to the 3rd position line. The share of sales in the retail segment remains prevailing for the company (around 57% of turnovers are pharmacy sales).

Producers that are intensively involved in the provision of drugs for the treatment of Covid-19 performed far above the market trends. That is why companies such as R-Pharm and Pharmasyntez found themselves in the top 20. R-Pharm moved up 63 position lines to rank 15th; Pharmasyntez gained 9 position lines to rank 19th.

Figure 49

Growth dependence on the share of drugs recommended for the treatment of Covid-19



ADDRESS: 7, BUILDIND 2, 5TH YAMSKOGO POLYA STREET,
MOSCOW, 125124 WWW.DSM.RU, DSMGIFTS.RU
TEL.: +7(495) 780 72 63