RUSSIAN PHARMACEUTICAL MARKET 2020

DSM GROUP

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Analytical Report
Russian Pharmaceutical Market
Results of 2020

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Summary

2020 turned out to be unprecedented for everyone. Any industry's performance is evaluated on the basis of the impact of Covid-19. It is the pandemic of the coronavirus infection that was the main driver of the changes on the market and in the economy. It has changed many of the established trends and tendencies and now it is much more difficult to analyze and forecast the current situation.

For the pharmaceutical industry the Covid year was some kind of a challenge and a test for strength. An increase in sales due to the feverish demand for drugs, the rise of the public segment, the growing importance and acceleration of legislative initiatives - all this significantly influenced both the overall market dynamics and the market environment. Furthermore, all this was happening against the changing conditions that all of us had to get adjusted to.

So, it is not surprising that among the events said to be the key events of 2020 were the coronavirus (61% of Russians think so, according to the VCIOM (Russian Public Opinion Research Centre) December 2020 survey), self-isolation and remote working (23% each, respectively). It is of note that in the opinion of most Russians the Russian healthcare system (doctors, medical staff and other Russian public healthcare workers) did their utmost during the spread of Covid-19 (48%) or even more (22%).

Certain laws were passed to support the industry, including legislative acts supposed to prevent problems with the provision of the population with drugs. In March, the State Duma passed through final reading a law on freezing drug prices during pandemics. Now, in certain circumstances, the government will be able to control prices for products in pharmacy chains.

In April, the State Duma passed a law on distance selling of drugs. In 2020, the law applied to over-the-counter drugs, but in case of an emergency and a risk of the spread of diseases dangerous for the public the government may temporarily allow distance selling also of certain Rx drugs.

One of the most significant legislative initiatives of the government was the introduction of the procedure for accelerated registration of drugs and medical products in case of an emergency.

The initiative enabled Russian manufacturers to promptly register and launch on the market two drugs for the treatment of the coronavirus infection: Favipiravir and Levilimab. The accelerated registration made it possible to offer on the market Russian Covid-19 vaccines and to start mass vaccination already in January 2021.

In 2020, Russia's pharmaceutical market was worth over 2,040 billion roubles, which is by 9.8% more than in 2019. In volume terms, sales of drugs dropped by 4% to come to 6.17 billion packages.

The ultimate performance of the pharmaceutical market in 2020 was conditioned on the consumer and the consumer's response to Covid-19, namely, the consumer demand shift factor. An increased demand for a certain group of drugs, driven by the news about methods of the treatment of the coronavirus infection, increased sales or, sometimes, caused shortages of drugs, as manufacturers were not always ready to promptly meet the emerging needs.

Alongside high dynamics in the commercial segment, public purchases of drugs continue to be a growth driver owing to additional funding of national projects. The highest growth in the purchase volumes in 2020 was recorded for drugs for needs of HCI. The major growth drivers were the «Fight Cancer» programme and the federal heart disease project launched in 2020.

The situation in the commercial segment of drugs in 2020 was quite confused: from panic buying in March to nearly negative dynamics in the summer. «Anti-covid» drugs became a growth driver. The drug names varied but owing to a high demand for them the market in general showed positive dynamics in roubles (+10.6%) and fell only by 2.3% in packages.

At the end of 2020, imported drugs in the overall market accounted for 56.3% in roubles, and for 31.4% in packages. In volume terms, the market growth was negative both for made-in-Russia drugs (-4%) and foreign-made ones (-3%). In rouble terms, localized drugs grew by 13%, and imported ones - by 8%. Those figures account for the non-achievement of the Pharma-2020 Strategy targets.

The top-ranking manufacturers remained foreign companies: Sanofi, Novartis and Bayer. There are three Russian manufacturers in the top 20: OTCpharm, Biocad and Pharmstandard.

As before, the main players in the new online sales segment are pharmacy chains. That is why most of the eCom business volumes are within the pharmacy retail sector. In 2020, pharmacy eCom was worth around 93.2 billion roubles (drugs and parapharmaceuticals), which corresponds to 6.6% of the pharmacy market capacity. In December, the figure grew already to 8.2%. Whereas the sales dynamics across the market makes for around 10%, the online turnovers grew against 2019 by 62%.

2020 saw the continuation of the trend towards consolidation of major players, though mainly through internal expansion rather than through mergers. As a result, the share of the top 20 players grew to 68%. The top performer by consolidation of pharmacies and pharmacy chains was ASNA, with a 14.4% share. Among traditional chains, the maximum share was held by Rigla chain: 6.7%. Erkapharm GC remained the third, with a 4.8% share.

One of the notable events in the distributor segment was the change of the leader. In 2020, distributor Puls with 14.7% came on top. Distributor Protek with 14.0% moved down to the second position. The third-ranking was distributor Katren with 13.8%. At the end of the year, the total share of the 10 largest distributors on the pharmaceutical market was 74.1%.

According to our forecasts, in 2021 the market will be worth 2,171 billion roubles, which is by 6% more than in 2020. Any other growth factors are hardly probable. One of the great expectations is the return to the «pre-covid» consumption patterns.

1. Volume of the Russian pharmaceutical market

When written in Chinese, the word 'crisis' is composed of two characters. One represents danger and the other represents opportunity.
John Fitzgerald Kennedy

In 2020, the world was following the news on the spread of the coronavirus pandemic: the number of infected people, methods of treatment, restrictive measures and their impact on the economy, the second and, probably, the third waves, development of vaccines, the number of vaccinated people, and so on. Either way, the topic remains a first-priority one in view of the global spread of the infection and high fatality rates. Covid-19 is, certainly, the major factor for the development of the pharmaceutical market last year. It influenced the market in many ways, involving economic processes, state regulation, and consumer demand.

We always analyze the market environment, in the first place, in terms of the applicable legislation. In this context, the pandemic turned out to be kind of an accelerator that speeded up the enactment of certain laws.

But for Covid-19, labelling would have certainly be named as the key event of the year. But in the period of the coronavirus, labelling became a stress test for the industry. The decision was made though the pharmaceutical market participants warned that amid the pandemic it could cause extremely adverse consequences for everyone: producers, pharmaceutical companies, retailers and, ultimately, consumers, i.e. patients who need drugs.

It was decided that as on July 1, 2020, drugs in Russia would have to be labelled. In its Order No. 955 dated June 30, 2020, the government set special procedures for imports and release for use of unlabelled drugs.

Following the introduction of the identification and tracking system, many pharmaceutical manufacturers, distributors and pharmacy chains started lamenting about failures in the information system for monitoring movements of drugs along the supply chain, which froze drug sales. As it all happened at the time of a peak in the demand, the Ministry of Industry and Trade provisionally allowed release of drugs a notification basis.

Given the epidemiological situation in the country and an increased demand for drugs, the mandatory labelling operator «The Centre for Development of Perspective Technologies» (CRPT) stopped charging drug labelling fees.

It was done when pharmacies started facing shortages of certain drugs, especially, amid a higher demand for medications badly needed for the treatment of the coronavirus infection.

At the end of 2020, the Centre for Development of Perspective Technologies announced that for pharmacies and medical organizations the introduced facilitated procedures for drug labelling would have no limit in time, and for economic agents they would remain in force until July 1, 2021.

To create conditions for a smooth transition to a strict traceability mode, the Ministry of Industry and Trade of Russia proposed another initiative, which was approved by the Government at the end of January 2021. Drugs put in circulation before February 1, 2021 will be subject to a «15-minute rule» until shelf life expiration.

Is the industry ready for labelling now? Around 86 thousand participants (data for February 2021) are registered in the Chestny Znak system. This number approximately corresponds to the total number of pharmacies, HCI, distributors and producers. According to CRPT, already in December labelled drugs on sale accounted for 32%. The codes registered in the system cover more than 6.6 billion packages, which corresponds to the annual consumption of drugs in volume terms. Of course, other questions will be posed and more problems will emerge but there is surely no going back.

Enactment of a number of laws that was triggered by Covid-19 was welcomed by the pharmaceutical community. For example, the introduction of a procedure for accelerated registration of drugs and medical products in the period of the pandemic. The mechanism of accelerated registration in case of emergency is envisaged by the Government's Orders No. 441 and No. 430, respectively. Owing to this measure, over a short period of time the market saw several drugs, such as Favipiravir and Levilimab, and over 120 test kits for virus RNA and coronavirus antibodies. The procedure was approved in April 2020 considering the spread of COVID-19. It has been extended until January 1, 2022.

Many procedures can be now performed electronically; GMP certificates have been extended; options for remote GMP inspections of manufacturing sites are available, and so on. All this has been done to ensure uninterrupted supply of drugs to the population.

Price regulation is not something new in the pharmaceutical industry. But the coronavirus pandemic triggered new public initiatives. The panic buying of personal protective equipment (medical face masks and gloves) caused evident shortages of these items. Producers and pharmacies were not ready to meet the increasing need in these product items. As a result, in March face mask prices went up several times. The culminating point was Order No. 431 (dated 03.04.2020), which set restrictions on pharmacy sales of medical face masks, gloves and other medical products. Among other things, it set a maximum retail markup for prices of those items – not more than 10 kopecks per item. As a result, pharmacies almost stopped selling face masks. The good thing is that the order was in effect only for several days: the mechanism of manual regulation of the retail markup that was not applied to all the market participants restrains competition. And then, the mechanism was no longer necessary: in March, many companies rearranged their facilities to produce the demanded items (face masks, gloves, sanitizers). So, the market «regulated itself» and the prices were back to the pre-crisis ones thanks to a bigger supply.

As before, a major issue for the market is pricing for VED. Many companies, such as, for example, Pharmstandard and Ozon, announced they would probably stop producing a number of cheap drugs from the VED list. Registered price ceilings for these drugs make their production unprofitable. The weakening rouble makes the situation even worse. For this reason, the Federal Antimonopoly Service (FAS) drafted legislative amendments to enable producers to increase the prices for VED if the market sees a shortage of a certain INN, formulation and dosage. These amendments aim to prevent inexpensive drugs from disappearing from the market because their production is unprofitable for producers, since such drugs are essential for consumers.

The Government's Order No. 441, which was in effect from April and to the end of 2020, allowed revising price ceilings for VEDs used in case of a threat of emergency. That provisional measure applied to drugs recommended by the Ministry of Health for the diagnosis, treatment and prevention of the novel coronavirus infection. Though limited in time and scope, the measure will prevent low-price segment drugs from disappearing from the market.

Speaking about public initiatives, one can't but mention authorized online drug trade. The draft law had been under consideration by the State Duma since 2017. For quite a long time, the pharmaceutical community managed to resist its enactment. But because of Covid-19, it happened to be adopted practically «in a day». Decree of the Russian President No. 187 took effect on March 17, 2020. The decree allows distance retail selling of over-the-counter drugs. Rx, narcotic and psychotropic drugs, including alcohol-containing medications (with an ethanol volume concentration above 25%) are prohibited to be sold online.

Though the law itself was adopted in no time, immediately after the introduction of the self-isolation mode, the online trading requirements were formulated only in the middle of May. Among the requirements (Russia's Government Order No. 697 dated May 16, 2020) were:

- pharmaceutical business in (at least) 10 outlets in the territory of Russia;
- a Website or a mobile application;
- own courier service or a contract with a delivery service;
- a pharmaceutical license of over 1 year (covering drug retailing).

At the end of the year, the Ministry of Health of Russia proposed amendments to the online drug trading requirements. The amendments enable aggregator Websites (marketplaces) to participate in distance selling and delivery of drugs and cancel the rule of 10 pharmacy outlets. The document aimed at facilitating the access of players to the market is expected to be adopted at the beginning of 2021.

Of course, all those measures and initiatives are very important for the market participants. But what was decisive for the pharmaceutical market and its ultimate performance in 2020 was the consumers and their response to Covid-19. If one wanted to single out only one factor to feature the last year's trends, it would be shifts in the consumer demand. An increased demand for a certain group of drugs, driven by the news about methods of the treatment of the coronavirus infection, increased sales or, sometimes, caused shortages of drugs, and producers were not always ready to promptly meet the emerging needs. In the end, the growth demonstrated by the Russian pharmaceutical market was even higher than was forecast at the beginning of the year.

The market dynamics in monetary terms came to 9.8%, instead of 5-6% forecast earlier. The market volume was at 2,040 billion roubles. Alongside high dynamics in the commercial segment, public purchases of drugs continue to be a growth driver owing to additional funding of national projects.

In dollars and euros, 2020 saw stagnation. Due to the increase in the currency rates in March, the market capacity did not grow in currency terms. In dollar terms, the volume in 2020 was 29 billion dollars, which is only 0.2% higher than a year before. In euro terms, due to a higher rate increase by 11%, the market dynamics went negative: -1.6%.

In packages, drug consumption remained negative. The reduction was observed not only in the commercial sector but also in hospital purchases, despite a perceptible inflow in money. In 2020, sales of drugs in volume terms dropped by 4% to come to 6.02 billion packages.

Figure 2 shows the dynamics of the volume of the Russian pharmaceutical market in 2019-2020, by segment.

The state sector – the publicly-funded market sector: hospital purchases, pharmaceutical benefits (including High-Cost ICD and Essential Drug Coverage programs) and regional benefits — accounts for 36% of the drug market volume.

The highest growth in 2020 was in purchases of drugs for HCI – to 401 billion roubles (+23.5%). The major growth drivers were the «Fight Cancer» programme and the federal heart disease project launched in 2020. More funds were allocated also to drugs put on the list of recommended medications for the treatment of the coronavirus infection. Purchases funded at the regional expense remained at the level of 2019 (+1.2%). But the total federal benefits were by 16% less than a year earlier. This was, among other things, due to a shift in purchases of certain drugs to the hospital segment.

Dynamics in the commercial segment of drugs could be hardly predicted in 2020: all the trends that had existed over time fizzled out. The growth in sales observed in March 2020 turned out to be one of the most notable ones over the last years. The feverish demand was triggered by the starting spread of the coronavirus infection and a worsening economic crisis. Russians rushed to buy large amounts of drugs, expecting a surge in prices amid the increase in the currency rates and the lack of essential drugs due to restrictive measures. Naturally, after the population had stocked up, the sales dynamics were weak and, in some months, even went negative. Only in December the market was back to the growth figures observed in January-February (before the coronavirus crisis). In April, the «anti-covid» drugs became a growth driver. The drug names varied but owing to a high demand for them the market in general showed positive dynamics in roubles (+10.6%) and fell only by 2.3% in packages. In 2020, 5,002 million packages of drugs worth 1,128 billion roubles (in retail prices) were sold through pharmacy chains.

In crisis period, pharmacy sales of parapharmaceuticals grow slower than sales of drugs. The year of 2020 was not an exception. The segment augmented by 6.7% to come to 279 billion roubles. Among the growth drivers were dietary supplements (vitamins and immunity boosters), personal protective equipment (face masks), sanitizers,

Figure 1

Pharmaceutical market dynamics

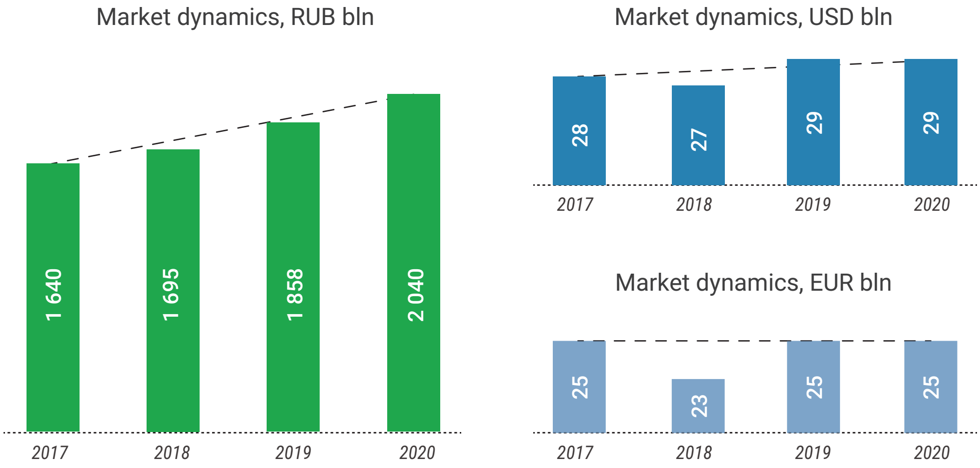
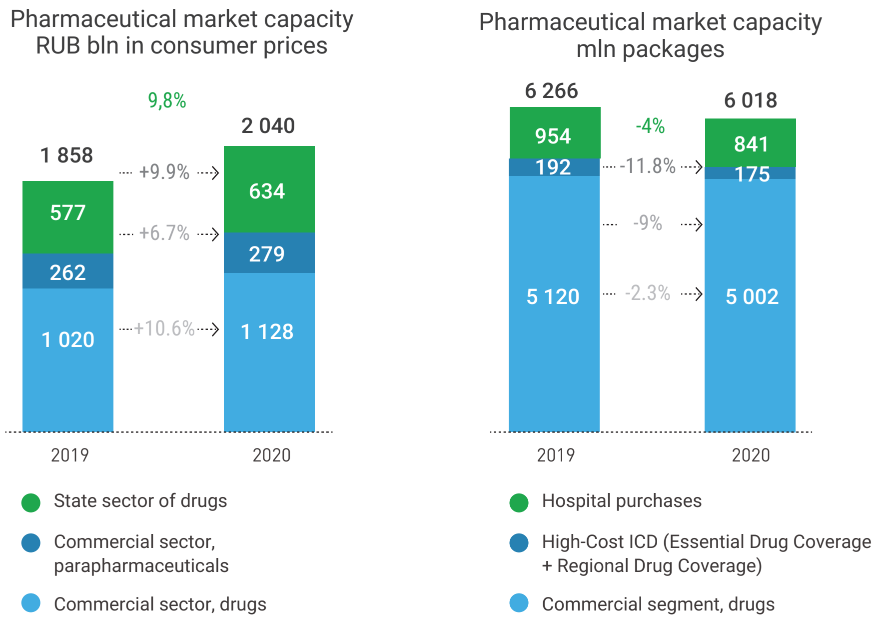


Figure 2

Pharmaceutical market capacity



medical appliances – what is indirectly but related to preventing the spread of the coronavirus infection.

Market in figures

At the end of 2020, imported drugs in the overall market accounted for 56.3% in roubles, and for 31.4% in packages. In volume terms, the market growth was negative both for made-in-Russia drugs (-4%) and foreign-made ones (-3%). In rouble terms, localized drugs grew by 13%, and imported ones – by 8%.

By the type of dispensing, the market structure varied towards over-the-counter drugs. Rx drugs account for around 67% in monetary terms. Owing to lower prices, however, OTC drugs prevail in packages and account for 54.9%.

Let us note that most of OTC drugs are sold in pharmacies (about 97% in roubles of the OTC volume). Rx drugs are sold mainly in the state segment: over 90% 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. VEDs account for a bit more than 50%, both in volume and value terms, of the total volume of the drug market.

In 2020, the share of original drugs was 43.7% in value terms, and 15.9% in volume terms. Compared to 2019, their share had increased, especially, as can be observed, in value terms (+3%). The growth was thanks to the increased funding in the state segment for purchases of expensive drugs. In pharmacy sales, on the contrary, generic drugs grow faster (+12% in roubles against +8% for original drugs).

The ATC rating in 2020 is headed by [L] Antineoplastic and Immunomodulating Agents, which include expensive drugs. Thanks to the increased funding in the public sector,

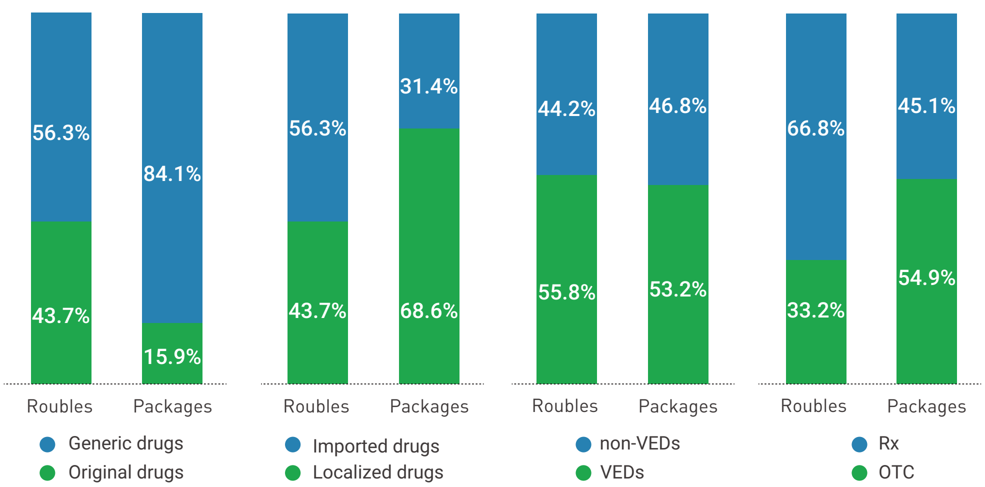


Figure 3

Market structure, various sections, 2020

Table 1

Structure of sales of drugs by ATC codes, 2019

ATC codes 1st level	Share in value terms, %	Share in volume terms, %
L: Antineoplastic and Immunomodulating Agent	16.01%	1.68%
A: Alimentary tract and metabolism	14.97%	15.09%
J: Antiinfectives for systemic use	13.90%	11.69%
C: Cardiovascular system	10.12%	12.25%
N: Nervous system	8.44%	14.34%
R: Respiratory system	8.30%	12.86%
B: Blood and blood forming organs	7.76%	7.05%
M: Musculoskeletal system	6.10%	6.73%
G: Genitourinary system and sex hormones	4.52%	1.69%
D: Dermatologicals	4.20%	10.19%
S: Sensory organs	2.01%	2.21%
Non-ATC	1.39%	2.26%
V: Various	1.24%	0.80%
H: Systemic hormonal preparations, excluding sex hormones	0.88%	0.80%
P: Antiparasitic products, insecticides and repellents	0.17%	0.36%

the volume of consumption of drugs of this category increased: +17%. The main channel, through which dispensing of antineoplastic drugs is funded, are pharmaceutical benefit programs (federal and regional benefits) – 35%, and hospital purchases – 52%. At their own expense, consumers buy only cheaper immunomodulators.

[A]: Alimentary Tract and Metabolism went down to rank 2nd, accounting for 15.0%. 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 more than the other groups, by 18%. 53% in this category are purchased for hospital needs, sales in the pharmacy segment came to 43.7% also by demonstrating high dynamics triggered by Covid-19.

2. Commercial drugs segment

The desire to take medicine is probably the main thing that distinguishes a person from other animals

William Osler

Consumption of drugs at the expense of the population is still a substantial drug coverage element of the public health system. It accounts for around 64% in money terms and nearly 85% in packages. In this context, pharmacies that are a sales channel are always subject to more stringent requirements. At the beginning of 2020, it seemed that pharmacies would be tasked primarily with ensuring prompt and seamless integration of sales of labelled drugs from July 1, 2020.

But the spread of the novel coronavirus infection drastically changed the entire market environment. Pharmacies had to face another challenge: shortages of certain pharmacy products. Surely, shortages of drugs is not something new. But until the previous year such shortages were mainly due to economic factors (pricing for VEDs, impossibility of price indexation; displacement of certain product items from the public procurement segment, which made it economically unprofitable to sell drugs only in the pharmacy segment).

In 2020, the situation became worse. A key factor accounting for shortages of drugs was Covid-19 that changed consumer demand trends. Any news about drugs put on the list of medications to treat or prevent the coronavirus caused panic buying and disappearance of such drugs from pharmacies. For example, at the beginning of the pandemic, the antimalarial drug under INN Hydroxychloroquine was believed to be effective in fighting the coronavirus. As a result, its monthly sales grew on average almost two-fold in April – December compared with the pre-covid times (about 35-40 thousand packages a month against 20 thousand in 2019).

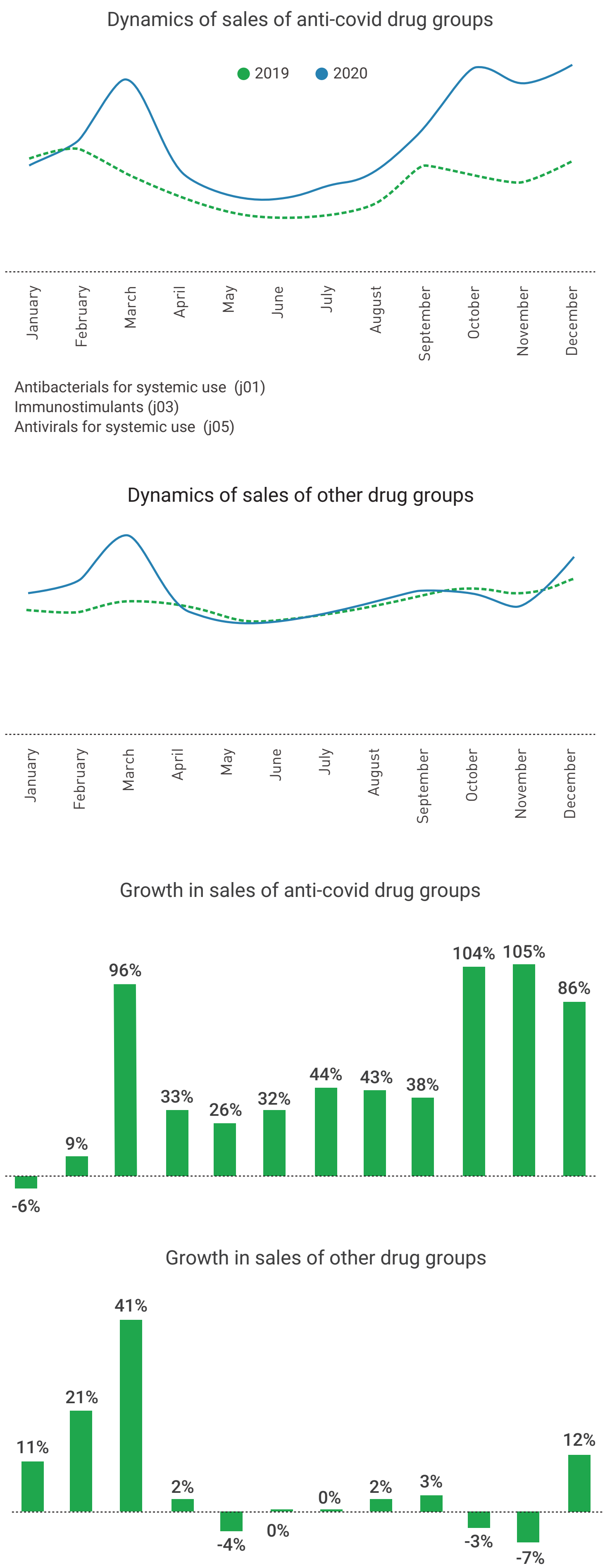
One of the symptoms of Covid-19 is a high temperature that is recommended to be reduced by taking paracetamol. At the height in March-April 2020, the demand for this drug group grew by 1.5 times. The increased demand affected supply and boosted prices for cheap items: the weighted average per package price of drugs under INN Paracetamol grew from 23 roubles in January to 43 roubles in December 2020.

No seasonal or other common trends inherent in the pharmacy market were observed in 2020. Antivirals and antibiotics took the lead in the consumer demand at the time of the pandemic. Even in summer, sales of these product groups were noticeably higher than in the past years.

The market growth is quite strongly conditioned on antivirals and anti-cold drugs. Over the last years, ARVI and influenza incidence rates remained low, in particular, thanks to the vaccination of the population. As on January 1 2021, according to Rospotrebnadzor (the Russian Agency for Health and Consumer Rights), 59% of the population (over 85.9 million

Figure 4

Seasonal trends in 2020



people) were vaccinated: at the expense of the federal public funding: 19.1 million children and 54.1 million adults (including 250.7 thousand pregnant women); at the expense of other sources: 10.4 million people, 4.1 million of which – at the expense of their employers.

According to the data from the A.A. Smorodintsev Research Institute of Influenza, the overall ARVI/flu incidence rates in November-December 2020 were 20.6% above the weekly epidemic threshold. Of course, one should make an adjustment for diagnostics inaccuracies since early-stage Covid-19 symptoms are the same as for ARVI. But it also had its impact on the consumption of antivirals.

Other drug groups demonstrated insignificantly positive dynamics; from April, some of them saw even a decrease in sales. Only in December 2020, the demand was back to the growth rates demonstrated in January-February.

2020 showed the market growth in roubles (11%), with negative dynamics in packages (-2%). In this regard, the retail segment sold about 5.0 billion drug packages worth 1,128 billion roubles (in retail prices).

The growth in sales of drugs in Russia in March amid the coronavirus pandemic hit its maximum for the last 10 years. Apprehending a rise in prices and the imposition of restrictive measures, Russians started stocking up on drugs. Yet, the impulse observed in March died out already by the beginning of the autumn. But for March, the annual dynamics would have been at: +7.2% in money and – 5.8% in packages.

The macroeconomic factors, namely, the pandemic-driven crisis, the lockdown, the decline of real incomes (-3.5% according to Rosstat), the population having to spend more money on mandatory charges and on savings, the overall inflation rate (4.91%) and the inflation for foods (6.7%) had a significant impact on the drug consumption structure.

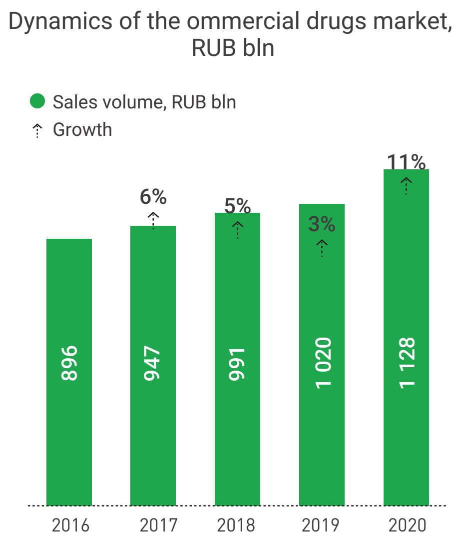
Imported/localized drugs sales ratio

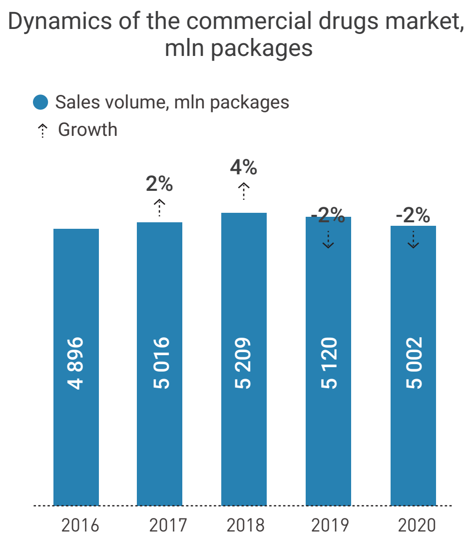
The structure of the commercial drug market by volumes of sales of localized and imported drugs is shown in Figure 5.

At the end of 2020, the share of made-in-Russia drugs grew by 2.3% to 44.2% in roubles, and reduced by 0.2% to 65.7% in packages.

Figure 5

Dynamics of retail sales of drugs, 2016-2020





Localized drugs (+16.5% in roubles against 2019) demonstrate higher dynamics than imported ones (+6.3%). This is in line with the general import substitution concept and makes the Russian healthcare system more independent. Sales of imported drugs kept «collapsing» during the year (in roubles), whereas localized drugs were steadily above the 2019 level. In volume terms, the drop in sales of localized drugs was bigger – 2.6% (against -1.8% for imported drugs). To a high degree, it was due to the drops in sales of low-price segment drugs, the so-called traditional domestic medicines: for example, Activated Carbon, Citramon, and the like.

The shift in the sales structure towards localized drugs was primarily on account of Russian antivirals Arbidol (+353.9% in value and +257.4% in volume) and Ingavirin (+110.9% in roubles and +63.0% in packages).

The growing share of localized drugs is an already established trend on the drug market. Since 2012, this figure has grown from 36% to 44%. In packages, the dynamics is less prominent: over 8 years, the share has grown by 1.6% only.

The weighted average price of a localized drug (+19.6%) grew more than that of an imported drug (+8.2%). Yet, a localized drug still costs less than half. In 2020, the average per package price of a localized drug was around 152 roubles, whereas an imported drug cost 367 roubles.

Though, on average, Russian and foreign manufacturers present on the market are more or less the same in number (around 540 and 560 companies, respectively), pharmacies have more foreign brands (around 3,368, or 9,053 SKU). The same figure for Russian drugs is 36% lower – 2,480 brands (8,615 SKU). This shows that foreign manufacturers sell more "unique" positions – original drugs and branded generics. Large amounts of Russian drugs are unbranded generics manufactured 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 6.

The year was the exact opposite of 2019, which can be seen in the dynamics and the structure of Rx and OTC drugs. Consumption

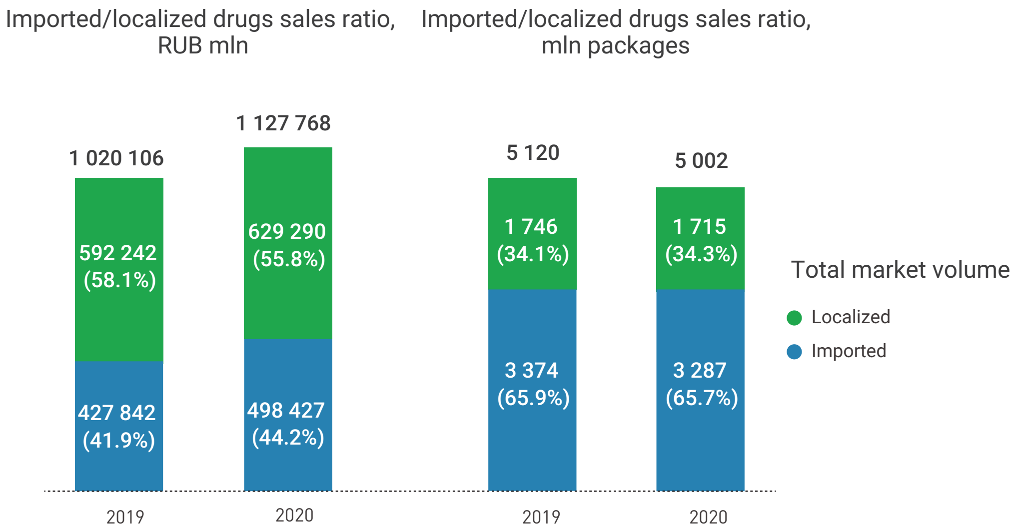


Figure 6

Imported/localized drugs sales ratio, Russian retail market, 2019-2020 of OTC drugs grew noteworthily, both at the height in March and during the year. Sales of OTC drugs are 13.3% higher than in 2019 (for reference: +8.0% for Rx drugs). This speaks of a self-medication trend. In one way or other, the trend was fuelled by mass media publications: there were many publications about how to treat the novel coronavirus infection, and they significantly influenced the consumption rates. OTC drugs include also immunostimulants: in 2020, they were much in demand.

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 (which accounted for 64.3%) are ahead.

The dynamics for several years shows a trend of the market structure shifting towards Rx drugs: for comparison, in 2012 they accounted for 46.6% in money and for 27.8% in packages. Another factor accounting for the trend is the tightening of the rules of dispensing of certain drugs. For example, from 2017 antibacterial drugs cab be sold in pharmacies only on prescription in order to prevent their uncontrolled use.

The average price per unit of an Rx drug was 316 roubles, an OTC drug cost 175 roubles on average in pharmacy retail prices. Prices for both categories rose compared to the previous year, by 8.0% and 17.4%, respectively.

Original/generic drug sales ratio

The market situation in 2020 promoted the basic trends of the past years. The highest retail sales were observed for generics: in roubles they accounted for 60.8% (+0.8% against 2019), in packages – for 82.3% (-0.7%). Whereas in packages generics are steadily above 80%, in roubles they demonstrate a distinct upward trend: from 54.6% in 2012 to 60.8% in 2020.

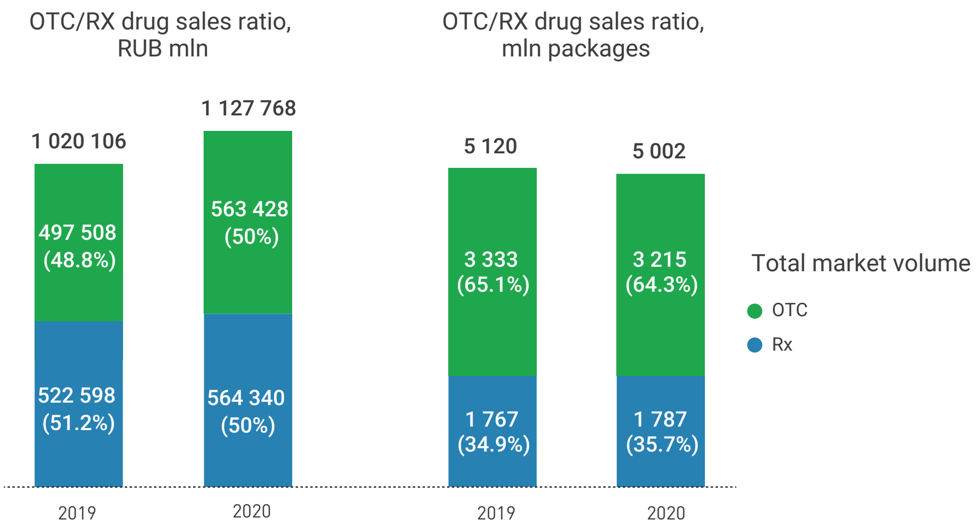
In absolute terms, sales volumes in roubles noticeably grew both for generics and original drugs: +12.1% and +8.3%. In volume terms, sales of generics dropped by 3.1% whereas original drugs grew in sales by 1.5% and this explains the shift in the market structure in packages towards original drugs.

The average price of an original drug was 499 roubles/package (+6.7% against 2019);

Figure 7

OTC/Rx drug sales ratio, Russian retail market, 2019-2020

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.*



a generic drug was sold on average at 167 roubles (+15.6%).

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 2020, there were some changes in the structure of the pharmacy market by ATC codes, 1st level, against 2019:

- the highest growth rates in the ATC rating were observed for antibacterials for systemic use (+48.1%), which moved [J] group up to the 5th position, with [M] and [G] left behind;
- [L] Antineoplastic and immunomodulating agents (+40.8%) and [S] Sensory organs (-1.2%) swapped their positions due to a variety of trends;
- [H] and [V] interchanged their positions due to a more markedly increased demand for hormonal preparations: +19.3% against +14.5%.

[A] Alimentary tract and metabolism is traditionally on top (+7.9%) with a 17.9% share in value terms. The best sellers in this ATC group were eubiotic Linex (2.7% in the group), and hepatoprotectors Heptral (2.4%) and Essentiale (2.3%). A substantial increase in sales was observed for Vitamin D3: calcium-phosphorus metabolism regulator AquaDetrim (+112.6%), hepatoprotector Heptral (+33.8%) and Magne B6 (+29.4%). At the same time, the biggest drop was recorded for another hepatoprotector Ursosan (-3.0%).

About 14.7% of the value volumes of sales in ATC [A] fall within [A07] Antidiarrheals. The leader by sales volume in [A07] was Linex, with a 18.3% share in roubles. Enterosgel and Bifiform are 2nd and 3rd in the value rating, with 9.8% and 7.0%, respectively. The leader by the number of sold packages is low-cost and generally home-made Activated Carbon (33.9% of sales in [A07]).

The highest dynamics in its ATC segment was observed in 2020 in [A13] Tonics – their sales volumes increased by 73.8% in roubles. One of the factors accounting for this is the higher demand for adaptogens and immunomodulants: Trekrezan (+95.0%), Trekresil (+281.8%) and Trekresolid (new).

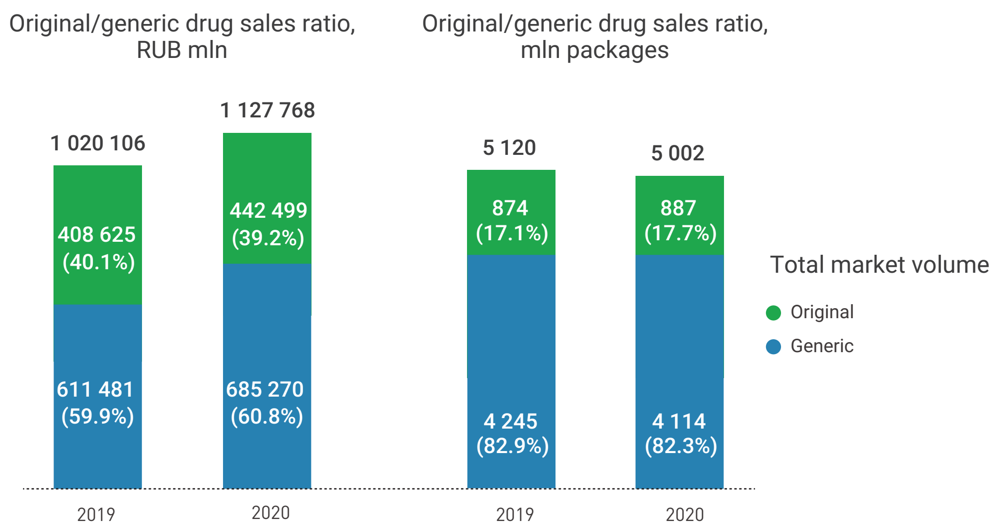


Figure 8

Original/generic drug sales ratio, Russian retail market, 2019-2020

Table 2

Drug sales structure, Russian retail market, by ATC, 2020

ATC codes 1st level Value,	Value, bln roubles	Increase in value,%	Volume, mln packages	Increase in volume, %
Alimentary tract and metabolism [A]	201.8	+7.9%	788.4	-6.6%
Cardiovascular system [C]	163.9	+9.0%	660.8	-2.5%
Respiratory system [R]	131.0	+3.6%	739.5	-4.8%
Nervous system [N]	124.6	+5.4%	781.9	-3.4%
Antiinfectives for systemic use [J]	107.0	+48.1%	403.7	+22.5%
Musculoskeletal system [M]	91.4	+7.2%	386.9	-0.1%
Genitourinary system and sex hormones [G]	77.0	-0.3%	98.3	-4.2%
Dermatologicals [D]	71.0	+12.7%	566.8	-6.6%
Blood and blood forming organs [B]	57.4	+14.3%	152.1	-1.5%
Antineoplastic and immunomodulating agents [L]	36.4	+40.8%	71.8	+30.9%
Sensory organs [S]	30.6	-1.2%	125.9	-8.0%
Non-ATC	19.2	+1.9%	135.6	-7.9%
Systemic hormonal preparations, excluding sex hormones [H]	7.1	+19.3%	34.8	+8.2%
Various [V]	6.9	+14.5%	34.6	-5.5%
Antiparasitic products, insecticides and repellents [P]	2.5	+0.6%	20.9	-10.4%

Second-best by value volumes is ATC [C] Cardiovascular System (14.5%). The leading brands in [C] are Detralex (4.5%), Concor (3.7%) and Lorista (3.3%). The drugs that contributed most to the 9.0% increase in sales in this category were antihypertensive agents Bisoprolol (+21.5%) and Lorista (+10.3%), as well as venotonic Troxevasin (+17.9%). Among the top ten brands in the group only Concor saw a drop in sales (-0.1%).

The third in the top three is ATC [R] Respiratory system, with an 11.6% share in roubles. Sales of [R] drugs grew by 3.6%. Most noticeable was the dynamics in [R02] Throat preparations (+6.0%) with the leading brands such as Grammidin (a 19.2% rouble share in the sub-group), Strepsils (18.9%) and Lysobact (12.5%).

Increase in the volume and average per unit prices in ATC codes is shown in Figure 8.

The maximum growth in 2020 was found in ATC codes [J] Antiinfectives for systemic use (+48.1%), [L] Antineoplastic and immunomodulating agents (+40.8%) and [H] Systemic hormonal preparations (excluding sex hormones) (+19.3%).

Sales in [J] and [L] remain high since April 2020, without any seasonal decline in summer.

The highest growth rates in antiinfectives for systemic use were observed in antivirals [J05] (+81.5%): Arbidol (+353.9%), Nomides (+301.8%) and Ingavirin (+110.9%).

Antineoplastic and immunomodulating agents rank second by the growth rates. The maximum increase in sales was demonstrated by immunostimulants [L03] (+48.3%) accounting for 89.2% in sales of [L] code. Among the most demanded within [L03] were immunostimulants Grippferon (+297.0%), Galavit (+172.7%) and Broncho-Munal (+156.8%).

The group of systemic hormonal preparations, excluding sex hormones, grew owing to glucocorticosteroids Dexamethasone (+71.3%), Diprospan (+51.5%) and Metypred (+33.4%).

In volume terms, the highest growth in consumption was observed in [L] Antineoplastic and immunomodulating agents (+30.9%) and [J] Antiinfectives for systemic use (+22.5%). The biggest drops in pharmacy sales of packages were recorded for antiparasitic products, insecticides and repellents (-10.4%), drugs for sensory organs (-8.0%), and non-ATC (-7.9%).

The highest weighted average per package price at the end of 2020 was 784 roubles for drugs in [G] Genitourinary System and Sex Hormones. The price is so high because the price per unit for certain drugs of this category is 10,000 roubles and more. A high weighted average price is observed also in [L] Antineoplastic and Immunomodulating Agents – around 507 roubles, and in [B] Blood and Blood Forming Organs – around 378 roubles.

How much various ATC categories 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 category multiplied by its growth rate (Figure 9).

Among the groups that most of all contributed to the growth of the commercial drugs market in 2020 were: [J] Antiinfectives for systemic use, [A] Alimentary tract and metabolism, and [L] Antineoplastic and immunomodulating agents, which totalled 7.3% or around 61.2% of the market growth on the whole.

Drug manufacturers on the retail market

Table 3 shows the top 20 manufacturers leading by the value of sales volumes on the Russian commercial market in 2020.

In 2020, there were more than 1,100 players on the Russian pharmaceutical market. Cumulatively, the top 20 companies cover 53.2% of the value of drug sales. Compared to 2019, the total share of the top 20 rose by 0.7%.

Changes during the year in the rating of manufacturers are less noticeable than in the top 20 brands: there was only one new player in the top twenty in 2020 – Russian Vertex (+5 position lines).

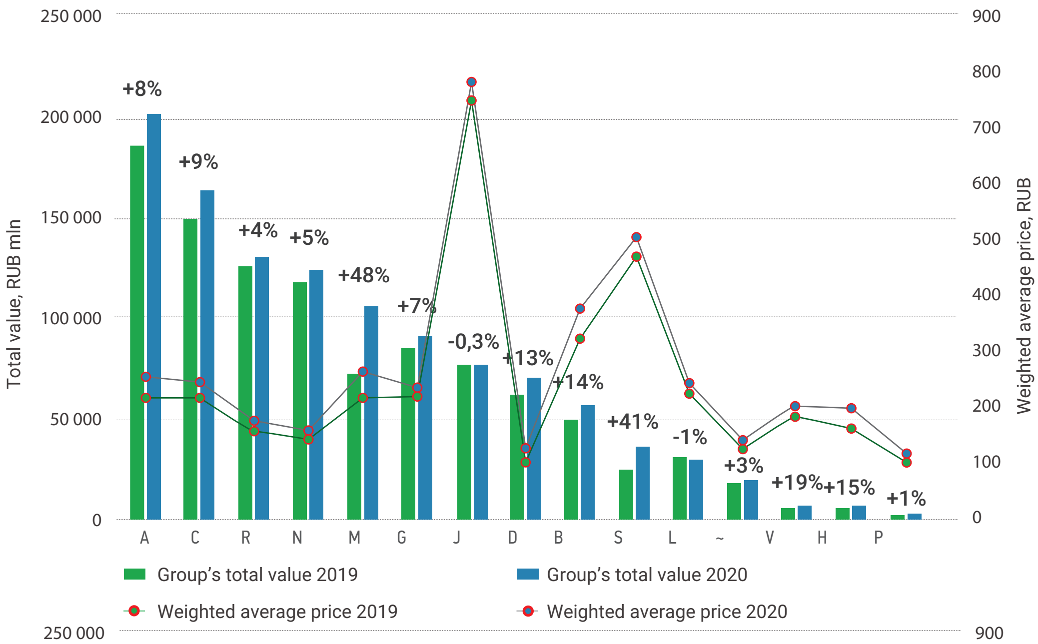
The first in the top 20 is German Bayer (a 4.6% share in roubles), whose sales grew by 18.1% against 2019. Novartis (4.2%) moved up to the 2nd position, having increased its sales volumes by 26.6%0. The third is OTCpharm (3.9%), also with positive sales dynamics (+37.1%; + 4 position lines).

Traditionally, the year-end market leader in the pharmacy segment is Bayer (4.6% in roubles), its volumes of sales in the pharmacy segment increased by 18.1%. The German corporation's portfolio comprises 68 brands sold in pharmacies. The company's maximum sales are from direct-acting anticoagulant Xarelto – at the end of 2020 it accounted for 22.7% of the company's sales in the rouble equivalent (+2.3% against 2019), growing by 31.2% in the sale volume for the year. The best seller (from Bayer's top 10) is antacid Rennie: +40.7% against 2019. In volume terms, the leaders by sales volumes are famous brands such as Relief, Rennie and Bepanthen. These three brands account for 32.4% of sold packages, which is nearly twice as much as the total share of these drugs in value terms in the company's sales.

The second best is Novartis Corporation with

Figure 9

Structure of the retail drug market, 2019-2020



a 4.2% share. Thanks to its sales growth rate of 26.6% by the end of 2020, the manufacturer moved 2 positions up in the rating. Several key drugs of the company saw a noticeable increase in sales: Broncho-Munal (+156.8% to the rate of sales in 2019), ACC (+54.3%) and Amoksiklav (+35.7%). Only antihyperglycaemic agent Galvus Met from the top ten of Novartis brands dropped in sales (-3.6% against 2019).

Russian OTCpharm (+4 position lines) moved up to rank third, being only 0.6% in roubles behind the leader. In 2020, the company's sales grew by 37.1% compared to the previous year. Russian pharmacies sell 37 of the company's brands; a significant increase in demand was observed for antivirals Arbidol (+353.9%) and Amixin (+104.7%). Among the key brands, there was also a «falling» group of drugs: antitussive Codelac (-11.0%), decongestant spray and drops Rhinostop (-4.4%), and anti-fungal Mycoderil (-2.9%).

Sales volumes increased with all drug manufacturers from the top 20, except for Gedeon Richter (-4.4%). The pharmaceutical corporation's dynamics was negative on account of potassium magnesium drug Panangin (-8.5%), antihypertensive agent Diroton (-6.7%) and the company's key brand – muscle relaxant Mydocalm (-2.7%).

Maximum growth rates were demonstrated by Russian Vertex (+49.6%), Valenta Pharm (+40.1%) and OTCpharm (+37.1%). Thanks to the increased demand for azalide antibiotic Azithromycin (+188.3%), antihypertensive drug Losartan (+167.0%) and antimicrobial fluroquinolone Levofloxacin (+126.1%), Vertex found itself among the leading manufacturers. Antiviral Ingavirin (+110.9%), recommended as part of a complex therapy for the novel coronavirus infection, moved Valenta Pharm 3 position lines up. Russian OTCpharm's share noticeably grew (+0.8%) owing to the increased sales of antiviral Arbidol (+353.9%) and Amixin (+104.7), and magnesium drug Magnelis (+22.4%).

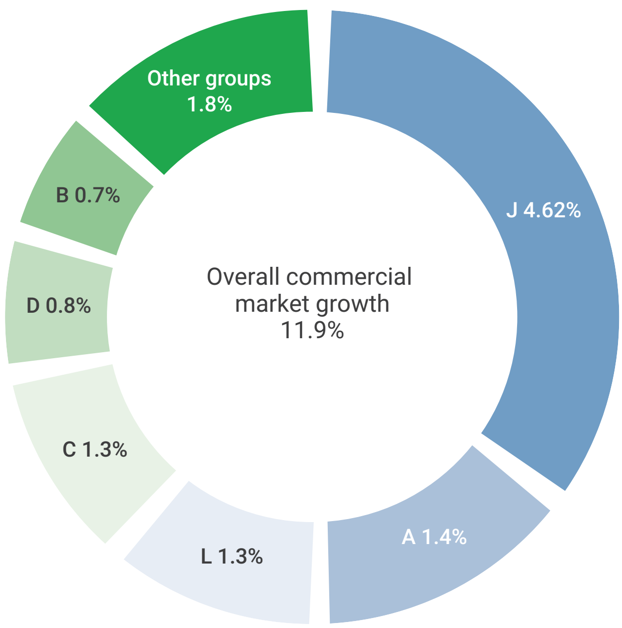


Figure 10

Weighted increase in retail market drugs, by ATC codes, 2020

Table 3

Top 20 drug manufacturers by value, 2020

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

Ranking	Change	Manufacturer	Sales volume, million roubles	Share, %	Growth, % 2020/2019
1	-	Bayer	**51,602.4**	**4.6%**	**+18.1%**
2	+2	Novartis	**47,044.8**	**4.2%**	**+26.6%**
3	+4	OTCpharm	**44,275.6**	**3.9%**	**+37.1%**
4	-1	Sanofi	**41,351.0**	**3.7%**	**+6.2%**
5	-3	Stada	**40,857.0**	**3.6%**	**+3.2%**
6	-1	Teva	**38,014.4**	**3.4%**	**+10.1%**
7	-1	Servier	**34,190.3**	**3.0%**	**+2.3%**
8	-	KRKA	**30,861.9**	**2.7%**	**+6.1%**
9	+1	A. Menarini	**30,683.7**	**2.7%**	**+11.5%**
10	-1	GlaxoSmithKline	**29,729.7**	**2.6%**	**+3.2%**
11	+1	Abbott	**26,753.4**	**2.4%**	**+8.8%**
12	-1	Gedeon Richter	**25,044.9**	**2.2%**	**-4.4%**
13	-	Johnson & Johnson	**22,338.8**	**2.0%**	**+4.6%**
14	-	Pharmstandard	**22,216.2**	**2.0%**	**+10.8%**
15	-	Polpharma	**21,000.2**	**1.9%**	**+15.5%**
16	+3	Valenta Pharm	**20,352.2**	**1.8%**	**+40.1%**
17	-	Pfizer	**19,847.6**	**1.8%**	**+11.4%**
18	-2	Dr. Reddy's	**19,623.2**	**1.7%**	**+8.9%**
19	+1	Ozon	**17,688.4**	**1.6%**	**+35.7%**
20	+5	Vertex	**16,737.6**	**1.5%**	**+49.6%**

There are more foreign companies among the manufacturers on the rating list: in 2020, there were already 5 Russian companies among the top 20: OTCpharm ranking 3rd (3.9% in roubles), Pharmstandard ranking 14th (2.0%), Valenta Pharm ranking 16th (1.8%), Ozon ranking 19th (1.6%), and Vertex ranking 20th (1.5%).

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 (7.3%). Stada holds around 4.0% in packages of pharmacy sales. The third in the top three is OTCpharm (3.6%). The top 20 manufacturers in the package rating hold more than fifty percent of the pharmacy retail market (52.2%), which is comparable to the concentration in value terms (53.2% held by the top 20 corporations).

Of particular mention is Vertex (+35.2%), which moved at once 7 position lines up. Among the most successful were the manufacturer's brands for treatment of heart diseases: antihypertensive drug Losartan (+148.9%), ACE inhibitor Lisinopril (+104.6%), and antibiotic Azithromycin (+176.0%).

Drugs on the retail commercial market

Table 5 shows the top 20 brands leading by the sales volumes on the Russian commercial market in 2020.

In 2020, 5,455 drug brands were sold through pharmacies. Top 20 drug brands accounted for 12.4% of the market in roubles. There is a number of changes in the rating of the brands leading by value on the retail market. The lead is kept by Bayer's direct-acting anticoagulant Xarelto (a 1.0% share in roubles), whose sales grew by 31.2% against 2019. The maximum growth rates were demonstrated by OTCpharm's antiviral Arbidol (a 1.0% share) that moved up from the 76th position to rank 2nd, having increased its sales by 353.9%. The third in the top three is Valenta Pharm's ARVI drug Ingavirin (1.0%). Over the year, sales of the antiviral drug increased by 110.9% and helped the brand to improve its rating position by 9 lines.

Positive dynamics was demonstrated by three drugs from Novartis: +67 position lines for Broncho-Munal (+156.8% against 2019) for treatment and prevention of respiratory infections, +13 position lines for mucolytic agent ACC (+54.3%), and +7 position lines for antibiotic Amoksiklav (+35.7%). Pfizer's direct-acting anticoagulant Eliquis (+59.2%) moved 10 position lines up.

Only two trade names suffered a decline. Nearmedic Plus' antiviral Kagocel moved down from the 8th position to the 18th line, having dropped in sales by 15.2%.

Actovegin to treat tissue injuries (21st in 2020), plant-based diuretic Canephron (22nd), hepatoprotector Essentiale (24th) and central muscle relaxant Mydocalm (32nd) are no longer on the rating list of key drugs.

Most of the drugs found in the 2020 rating 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: traditionally cheap Citramon (1.7% in packages), Paracetamol (1.6%) and Acetylsalicylic Acid (1.5%). Most of the drugs (13 brands) out of

Table 4

Top 20 drug manufacturers by volume, 2020

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

Ranking	Change	Manufacturer	Sales volume, million packages	Share, %	Growth, % 2020/2019
1	-	Pharmstandard	367.4	7.3%	+0.7%
2	-	Stada	201.3	4.0%	-0.4%
3	+1	OTCpharm	180.5	3.6%	+6.1%
4	-1	Ozon	177.5	3.5%	-10.6%
5	+3	Renewal	151.5	3.0%	+10.7%
6	-	Tula Pharmaceutical Factory	149.6	3.0%	+0.8%
7	-	Teva	144.9	2.9%	+4.7%
8	+1	Polpharma	121.3	2.4%	+4.8%
9	-4	Veropharm	119.6	2.4%	-28.2%
10	+1	Novartis	117.7	2.4%	+17.0%
11	-1	Dr. Reddy's	112.0	2.2%	+1.9%
12	-	Sanofi	100.8	2.0%	+0.2%
13	+1	A. Menarini	93.0	1.9%	+5.3%
14	+1	Sintez	91.6	1.8%	+4.8%
15	+7	Vertex	89.6	1.8%	+35.2%
16	+4	Gippokrat	84.8	1.7%	+7.1%
17	+2	Johnson & Johnson	79.3	1.6%	-0.8%
18	-2	GlaxoSmithKline	79.1	1.6%	-4.8%
19	-1	KRKA	76.3	1.5%	-5.9%
20	+5	Grotex	74.9	1.5%	+29.2%

the top 20 by volume demonstrated negative dynamics. The biggest drop was observed for Antibacterial Plaster (-37.0% against 2019), intestinal sorbent Activated Carbon (-26.6%) and sedative Valerian (-15.8%).

The maximum growth rates were demonstrated by cephalosporin antibiotic Ceftriaxone (+55.6%), analgesic Paracetamol (+44.4%) and antiseptic Hydrogen Peroxide (+18.7%), which can also be explained by the epidemiological situation in the country. The top 20 brands by volume account for 20.2% of retail sales, which is a higher concentration than by value. The weighted average price for the top 20 in packages is about 45 roubles.

6. 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.

From January 1 2020, the VED list comprised 758 items, having been extended for 23 drugs against 2019; besides, one of the listed drugs will be substituted by: 8 new antineoplastic drugs, 4 bronchial asthma drugs, 3 antibiotics and anti-fungal agents, two drugs to treat hepatitis C and two drugs to treat rheumatoid arthritis, drugs for treatment of diabetes, excessive growth hormone, psoriasis, and schizophrenia, and one drug for magnetic resonance diagnostics.

At the end of 2020, 722 INNs from the VED list (2,286 brands) were recorded as sold through pharmacies. VED sales were worth 417.9 billion roubles, or 2,266 million packages (Figure 10).

Let us note than in value terms the growth in sales of VEDs was more noticeable than of other drugs (+13.4% – VEDs, +8.9% – non-VEDs). In volume terms, the sales of VEDs increased by 1.8% whereas sales of non-VEDs decreased by 5.5%.

Domestic vital and essential drugs in volume terms accounted for 58.8% and for 39.0% in money terms.

At the end of 2020, the weighted average price for VEDs was 184 roubles; the price per unit for domestic drugs was about 122 roubles whereas that of imported ones – almost 2.2 times higher (273 roubles).

The average price of VEDs was lower than the weighted average price for other drugs (259 roubles). It shows that the shift in sales towards expensive drugs in the VED segment was less perceptible than across the whole market.

Figure 11 shows the price index for various drug groups.

In 2020, drug inflation was more noticeable than in 2019, especially against the figure for the previous year (1.8%): by the end of December 2020, prices had grown by 7.3% compared to December 2019. In 2020, inflations rates rose to 8.5% and affected most of all non-VEDs. The increase in prices for VEDs was insignificantly but lower: in 2020, they grew by 5.0%. It happened because manufacturers were able to index prices for cheaper VEDs.

The sales rating for INNs from the VED list is shown in Table 6. The leader of the VED INN rating is Xylometazoline: in 2020, its sales grew by 1.8% compared to the previous year. Notable is that Xylometazoline was the leader also in 2016-2019.

The rating structure noticeably changed: 5

Table 5

Top 20 brands by value, 2020

Ranking	Change	Brand	Sales volume, mln roubles	Share, %	Growth, % 2020/2019
1	-	Xarelto	**11,698.7**	**1.0%**	**+31.2%**
2	+74	Arbidol	**11,220.1**	**1.0%**	**+353.9%**
3	+9	Ingavirin	**11,045.4**	**1.0%**	**+110.9%**
4	-2	Nurofen	**7,905.9**	**0.7%**	**+1.3%**
5	-	Miramistin	**7,822.3**	**0.7%**	**+22.0%**
6	-3	Detralex	**7,347.0**	**0.7%**	**+6.2%**
7	+10	Eliquis	**6,937.6**	**0.6%**	**+59.2%**
8	-2	Pentalgin	**6,807.4**	**0.6%**	**+8.8%**
9	-	Teraflu	**6,711.6**	**0.6%**	**+13.9%**
10	-6	Mexidol	**6,562.1**	**0.6%**	**+0.2%**
11	+67	Broncho-Munal	**6,311.0**	**0.6%**	**+156.8%**
12	-2	Cardiomagnyl	**6,183.4**	**0.5%**	**+5.9%**
13	-6	Concor	**6,073.4**	**0.5%**	**-0.1%**
14	+13	ACC	**5,531.7**	**0.5%**	**+54.3%**
15	+3	Linex	**5,426.2**	**0.5%**	**+26.2%**
16	-3	Lorista	**5,345.3**	**0.5%**	**+10.3%**
17	+7	Amoksiklav	**5,285.5**	**0.5%**	**+35.7%**
18	-10	Kagocel	**5,078.4**	**0.5%**	**-15.2%**
19	-4	Lozap	**5,032.0**	**0.4%**	**+5.2%**
20	-4	Voltaren	**5,008.7**	**0.4%**	**+6.4%**

new INNs appeared in the top 20 owing to high dynamics in sales: Umifenovir (+33 position lines; +309.8% against 2019), Tiloron (+26 position lines; +110.1%), Azithromycin (+14 position lines; +101.6%), Interferon alfa-2b (+14 position lines; +93.3%), Acetylcysteine (+6 position lines; +56.1%). Antivirals, cytokines, expectorants and mucolytic agents, antiinfectives – all of them make part of the complex treatment of the novel coronavirus infection and other ARVI.

Price segmentation of retail market drugs

The weighted average per package price was 225 roubles, which is by 13.2% more than in 2019. Russians tend to be less attracted by cheap drugs; pharmacy consumers tend to buy more expensive medicines and bigger packages. Amid the crisis (a rise in dollar and euro), it was impossible to drive down prices for drugs. The inflation rate is surely lower than in 2014-2015 when the exchange rates soared, still, it is fairly high – 7.3% (especially, if compared with 1.8% in 2019).

Figure 12 shows the commercial market structure and the average per package price in price segments, 2019-2020.

Over the year, the market structure in roubles changed by shifting towards a higher price segment compared to the previous year. All categories except for 'up to 50 roubles' group demonstrated positive sales dynamics. The most notable sales growth was recorded for drugs priced over 500 roubles (+17.6% in roubles and +18.7% in packages). Owing to this, the share of expensive drugs increased by 2.7% in rouble and by 2.0% in volume terms. It is worth noting that this segment 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. The rate of inflation for this drug group is one of the lowest, 5.3%. So, the major factor were changes in consumer preferences and choice of drugs.

The highest inflation rate, 27%, was observed for the cheap segment drugs, and such a substantial increase in prices was for all drugs, VEDs and non-VEDs. It changed their price segment. In consequence, in 2020 this group lost its leading positions in packages: as a result of decreased sales, its share shrank by 6.7% in volume terms and by 0.8% in value terms. If measured for several years, the drop in the share was more distinct: from 53.1% in packages and from 7.1% in roubles in 2012.

In terms of packages, the highest growth was observed for drugs in the «RUB 50-150» price segment (+2.5%).

The most stable segment is «RUB 150-500» – over time its share remains at 40–46% in value terms.

If the consumer basket is 'fixed' at the level of 2019 (i.e. when, regardless of how much a drug costs in 2020, it falls within the segment where it is found at the end of 2019), then the share of drugs priced less than 50 roubles in 2020 is 6.3%, i.e. 2.1% higher than in 2019. It shows that in 2020 a substantial proportion of cheap drugs became more expensive and automatically moved up to a higher price segment. Another proof of that is the increase in the average per package price in the «up to RUB 50» segment by 11.1%. Yet, the drug group in the low price segment is the only one with negative dynamics in packages (-12%). Thus, the actual consumption in this segment is observed to be declining.

With the consumer basket «fixed» at the level of the previous year, high positive dynamics in volume is demonstrated by the «Above RUB 500» segment (+11%). So, it can be concluded that the consumer is more targeted at more expensive drugs and bigger packages.

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 the reporting period, the price factor had a major impact: in December 2020, prices rose by 7.3% against December 2019, whereas a year earlier that indicator was at 1.8%.

In 2020, inflation for drugs (7.3%) was higher than the overall consumer price index reported by Goskomstat (the State Statistics Service) (4.91%).

Prices for the most-in-demand drugs grew somewhat slower than the overall inflation for drugs: in 2019 the price index for the top 100 brands by turnovers was 6.3% (Figure 13). It is of note that before April 2020 the increase in prices was more or less equal, but starting from the summer pharmacies used different techniques for various products in an attempt to attract the customer by lower prices for items that were less demanded in 2020 than in 2020 under the influence of the epidemiological situation.

The price index for imported and localized drugs in 2020 is shown in Figure 14.

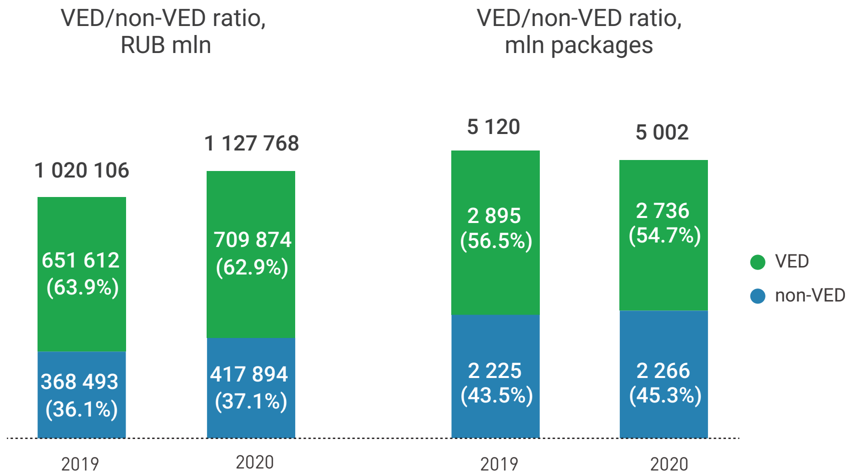
High price growth rates are observed in all sub-groups: prices for imported drugs rose by 6.1%, prices for localized drugs grew by 8.9%. The average price for Rx drugs grew by 6.2%, for OTC drugs – by 8.4%.

In 2021, Rosstat is going to increase the «consumer basket» size for inflation measurement purposes from 40 to 53 drug names. The extended list includes, inter alia, drugs for treatment of the novel coronavirus infection: Azithromycin, Ceftriaxone, Oseltamivir (Nomides brand), Apixaban (Eliquis), and Vitamin D3.

Figure 15 shows the general consumer price index and price indices for individual categories of goods and services.

Figure 11

VEDs/non-VEDs sales ratio, 2019-2020



In 2020, the general consumer price index was 4.91%. Inflation in 2020 was at its highest since 2016 (2016: 5.4%; 2017: 2.5%; 2018: 4.3%; 2019: 3.0%), by more than 1 percentage point above the rate projected by the government (3.8%). Only in mid-December the Central Bank of the Russian Federation increased the forecast range from 3.9-4.2% to 4.6-4.9%. According to the estimates of the Ministry of Economic Development, the major factors that accelerated inflation were the weakening of the rouble and the increase in exchange prices for key food products.

In December 2020, foods increased in price by 6.7% against December of 2019 – 2.6 times more than in the previous year (2.6%). The lowest growth is in prices for petrol (2.5%) and services (2.7%).

In 2021, the Bank of Russia expects prices to grow by 3.5-4%.

New drugs on the retail market

In 2020, around 300 new drug brands appeared in commercial pharmacies. Sales of novel drugs at the end of the year totalled 2.26 billion roubles, or 5.6 million packages, which is equivalent to 0.20% and 0.11% of the overall pharmacy sales of all drugs, in value and in volume, respectively. The weighted average per unit price of novel drugs was 407 roubles.

The ratio of domestic and foreign brands in the novel drugs of 2020 was 78% to 22%. Compared to the similar ratio for 2019 (77% to 23%), now Russian drugs slightly prevailed, which speaks of the increasing growth of the market share of Russian drugs in the retail segment, in particular, due to the emergence of new positions on the market.

Most of the drugs in the rating are novel drugs made by Russian companies (16 names). None of the top 20 novel drugs is original, all of them are generics.

By the volume of retail sales in value terms, the key brand among the novel drugs that emerged on the Russian market in 2020 was Areplivir made by Russian Promomed Rus. Its sales were worth 387.4 million roubles. The marketing authorization files classify Areplivir as belonging to the therapeutic group of antivirals. The main active ingredient of Rx Areplivir is Favipiravir. The drug in the form of film-coated tablets is intended to be used in the treatment of the novel coronavirus infection (COVID-19).

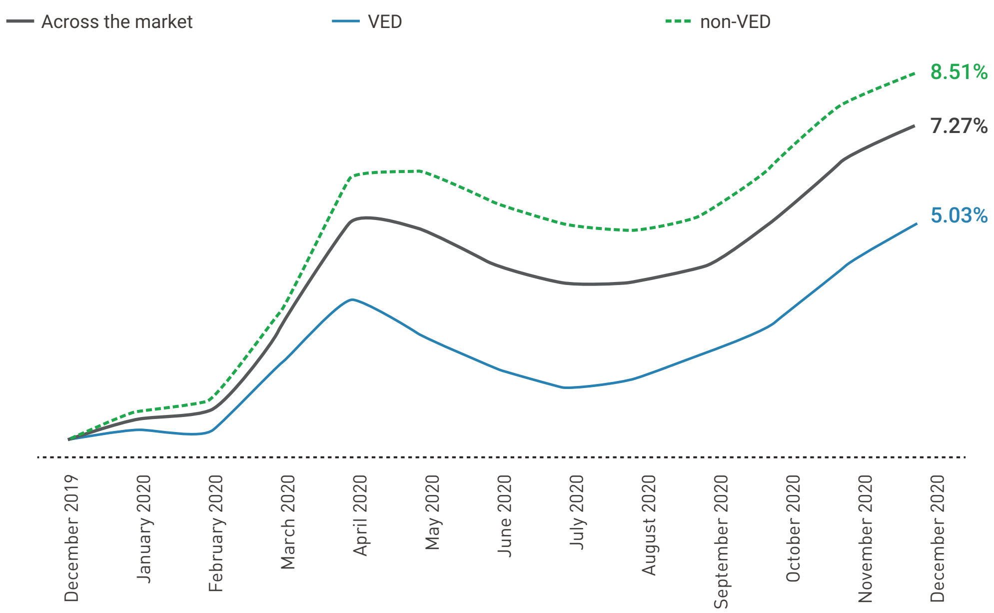


Figure 12

Price index dynamics on the retail market, 2020

Table 6

Top 20 INNs on the VED list, by value of sales, in 2020

Ranking	Change	INN	Share in sales of VEDs, roubles	Sales volume, billion roubles	Leader among brands within INN
1	-	Xylometazoline	4.3%	17.9	Snup
2	+33	Umifenovir	3.0%	12.4	Arbidol
3	-1	Ibuprofen	2.9%	11.9	Nurofen
4	+1	Rivaroxaban	2.8%	11.7	Xarelto
5	+9	Imidazolyl Ethanamide Pentandioic Acid	2.6%	11.0	Ingavirin
6	-3	Bisoprolol	2.5%	10.6	Concor
7	-3	Pancreatin	2.5%	10.2	Creon
8	+14	Azithromycin	1.9%	8.1	Azithromycin
9	-	Amoxicillin + [Clavulanic acid]	1.8%	7.5	Amoksiklav
10	-4	Ethylmethylhydroxypyridine succinate	1.8%	7.4	Mexidol
11	-3	Losartan	1.7%	7.3	Lorista
12	-5	Atorvastatin	1.7%	7.1	Atorvastatin
13	+6	Apixaban	1.7%	6.9	Eliquis
14	+14	Interferon alpha-2b	1.5%	6.3	Grippferon
15	-2	Metformin	1.5%	6.3	Metformin
16	-5	Omeprazole	1.5%	6.1	Omeprazole
17	+26	Tiloron	1.4%	5.9	Amixin
18	-	Ademetionine	1.4%	5.8	Heptral
19	+6	Acetylcysteine	1.3%	5.6	ACC
20	-8	Ursodesoxyholic acid	1.3%	5,4	Ursosan

The second-best is Trekrezolid made by Usolie Siberian Chemical Pharmaceutical Plant. Trekrezolid is an adaptogen used in complex therapies to prevent and treat acute respiratory diseases, and at the time of high intellectual and physical activity, and to increase stress resistance. In 2020, sales of the drug were worth 221.9 million roubles.

The third in the rating is Coronavir (produced by R-Pharm), its sales were worth 159.8 million roubles. As in Areplivir ranking first, the active ingredient is Favipiravir; so, the drug also belongs to the therapeutic group of antivirals and is intended to be used in the treatment of COVID-19.

In 2019, Grotex was the absolute leader among manufacturers by the number of drugs on the rating list. In 2020, the rating is more balanced. The leading manufacturer is Polpharma holding three rating positions at once. Next come several manufacturers, equally mentioned in the rating (Promomed Rus, Grotex, Severnaya Zvezda and Ozon).

The global spread of the coronavirus infection much influenced also sales of novelties. In 2020, many pharmaceutical companies intensively embarked on initiatives for launching the production of drugs to treat the coronavirus infection. Such efforts resulted in high sales volumes as the issue was urgent.

Half the novel drugs can be classified in some way as drugs officially recommended by the Ministry of Health of Russia for the treatment of COVID-19, which also gained renown among consumers as drugs supposed to be effective in the fighting and prevention of the coronavirus. Among them are drugs used in pathegenic, etiotropic treatment and therapies easing the symptoms of COVID-19. These are the new drugs containing Favipiravir, anticoagulant Kvadraparin, which was prescribed also as a prophylactic drug, high-concentration Vitamin D3 Fortedetrim, the lack of which was proved by certain studies to be correlated to the morbidity of the disease.

A variety of immunomodulants and antivirals with already registered molecules found

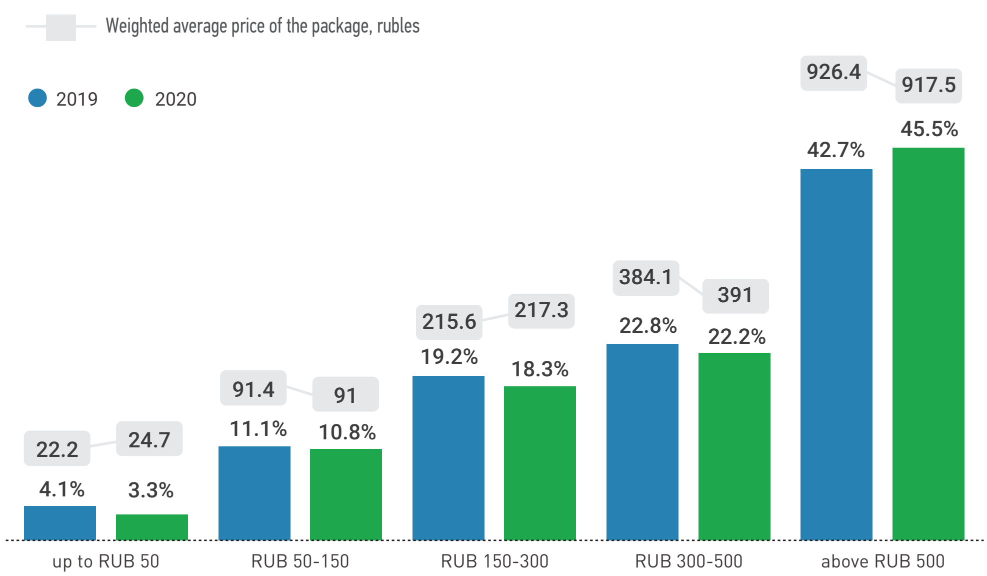


Figure 13

Value sales structure, retail market, by price segments, 2019-2020

Figure 14

Change in prices for drugs on the Russian retail market, 2020

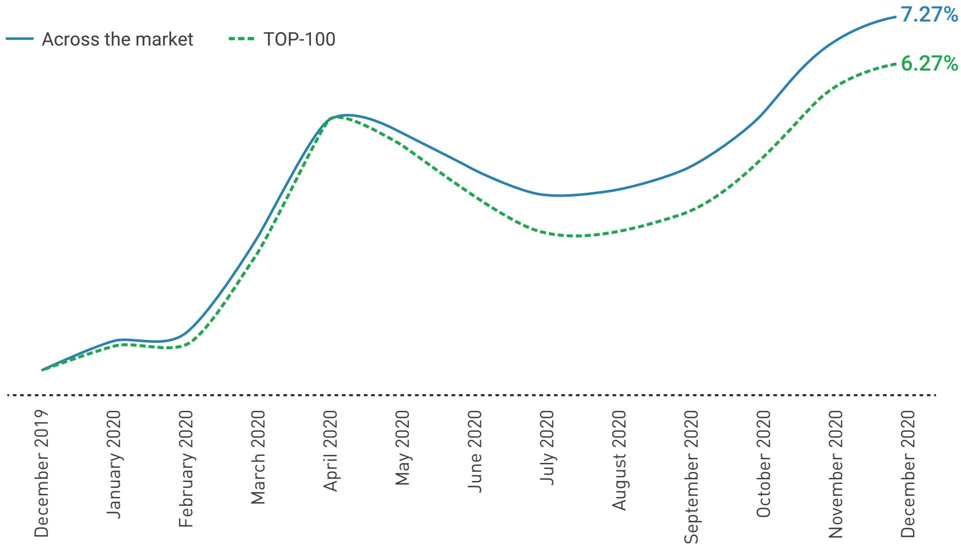
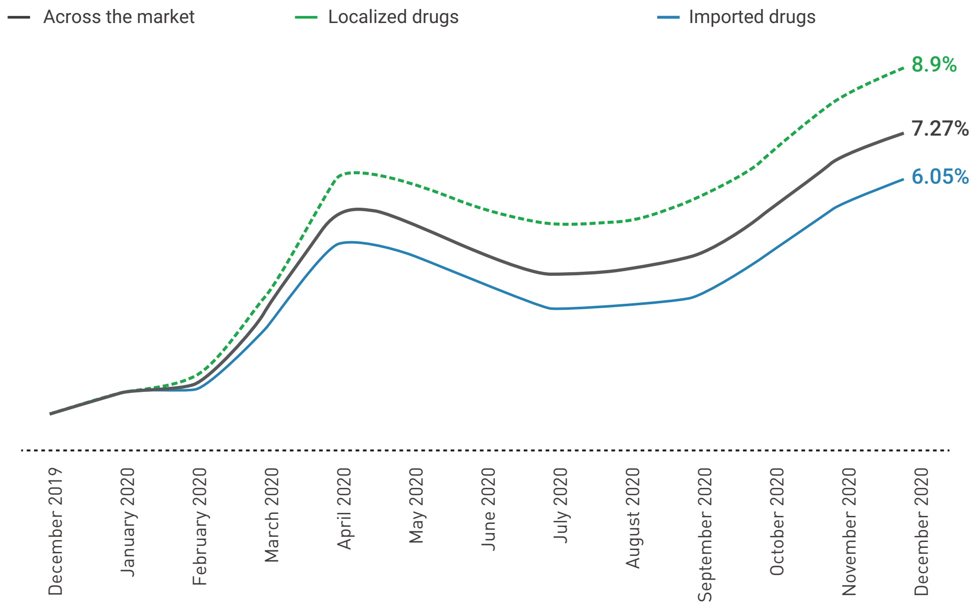


Figure 15

Price index for import and localized drugs, Russian retail market, 2020



a market, too. For example, Trekrezolid, which was developed as a result of internal controversies between the pharmaceutical company and the manufacturing site, ranked second among novelties with a 7.7% share by value within its INN. Tiloron-Alium and Umifenovir are also found in the rating.

On the rating list are also Paracytolgin and Nuralgon that contain the most commonly used combination of substances to reduce the temperature – Ibuprofen+Paracetamol.

Worthy of note is the re-appearance on the market of the drug with INN Fonturacetam, released by Valenta Pharm under the trade name of Nanotropil. The brand's sales in 2020 outstripped many-fold the total sales of Phenotropil for the last two years, to help the drug rank fourth in the top twenty novelties.

Drugs containing the active ingredient Etoricoxib, such as Atorica and Etoria, did well, too. In the months, during which they were sold, they accounted for 1.5% and 2.1% in packages, respectively, within their INN. Appearance of new generics substantially contributes to the accessibility of drugs, especially, of non-VEDs. In 2020, the price of a sold weighted average package under INN Etoricoxib dropped over the year from 731 roubles to 696 roubles per package. Original Arcoxia, holding the lead in this INN, accounts for 68.0% of sales in packages and 78.3% in value terms.

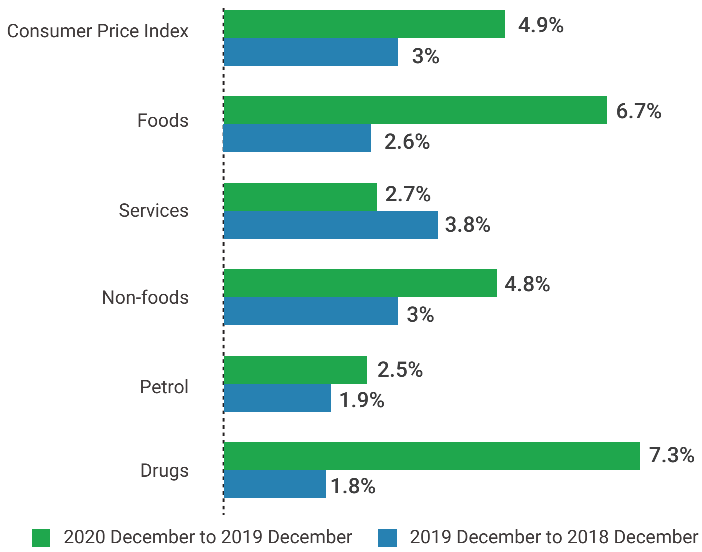


Figure 16

Consumer price index in Russia

Table 7

Top 20 new brands on the Russian commercial market in 2020

Ranking	Brand	Manufacturer	Sales volume, million roubles	Date of availability in a pharmacy
1	Areplivir	Promomed Rus	**387.4**	September 2020
2	Trekrezolid	Usolie Siberian Chemical Pharmaceutical Plant	**221.9**	June 2020
3	Coronavir	R-Pharm	**159.8**	September 2020
4	Nanotropil	Valenta Pharm	**148.4**	May 2020
5	Kvadraparin	Grotex	**66.7**	August 2020
6	Ethylmethylhydroxypyridine succinate	Polpharma	**54.7**	February 2020
7	Fortedetrim	Polpharma	**36.6**	November 2020
8	Baktikap	Ozon	**26.1**	February 2020
9	Dimetindene	Polpharma	**24.8**	January 2020
10	Paracytolgin	Sintez	**24.7**	August 2020
11	Tiloron-Alium	Alium	**24.3**	September 2020
12	Lornoxicam	Moscow Endocrine Plant	**23.5**	April 2020
13	Nuralgon	Medisorb	**23.0**	July, 2020
14	Oftarint	Grotex	**21.7**	June 2020
15	Etoria	Promomed Rus	**20.7**	February 2020
16	Doxylamine	Severnaya Zvezda	**18.7**	May 2020
17	Umifenovir	Ozon	**18.5**	April 2020
18	Zafrilla	Gedeon Richter	**17.7**	July, 2020
19	Atorika	Veropharm	**17.5**	May 2020
20	Gliclazide-C3	Severnaya Zvezda	**11.4**	August 2020

3. Drug reimbursement program (DRP)

Pharma industry is the art of making billions from milligrams.

Gerhard Kocher

The Russian legislation entitles vulnerable social categories to social benefits provided by the state. Within the framework of reimbursement programs draft budgets at different levels annually envisage costs on purchasing the necessary drugs for benefit-entitled social categories.

A uniform register of patients entitled to subsidized drugs will come into force in 2021 (Federal Law No. 206-FZ dated July 13, 2020).

Also, a federal centre for the population drug coverage will start working in Russia. The centre will be in charge of organizing purchases of drugs under federal programs. It is about, inter alia, drugs for patients with orphan and oncological diseases, HIV infection and tuberculosis, and also about vaccines covered by the National Vaccination Schedule.

Also, the centre will monitor drug procurements and forecast regional needs in medications. As has been noted by the national administration, it will contribute to excluding possible disruptions of supplies of drugs and forming well in advance the necessary backup stocks.

One of the basic DRP schemes is the Essential Drug Coverage program on the provision of benefit-entitled social categories with necessary drugs by prescription according to the healthcare standards by using the federal budget funds. The scope of social services for benefit-entitled social categories, including free-of-charge provision of drugs, is defined by Federal Law No. 178-FZ dated July 17, 1999 «Concerning the Government Social Assistance»; the said services apply to 9 social categories: disabled, disabled children, disabled war veterans, World War II participants, combat veterans, and others.

The rate of the monthly spending allowance per person entitled to government social assistance in the form of a social service on the provision of drugs, medical devices, and specialized medical nutritional products for disabled children, increases every year. As of February 1, 2020, the rate of allowance is 886 roubles and 40 kopecks: this is the amount of the social service for those who are entitled to federal benefits unless they choose instead to get said amount in cash (Government Decree No. 1145 dated July 31, 2020).

The Essential Drug Coverage list will be no longer valid as of January 1, 2021 and special-purpose committees in medical institutions that were in charge of making the said list will be abolished. From this year on, social categories entitled to federal as well as regional benefits will be 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.

On November 23, 2020, the Prime Minister signed Order No. 3073 to extend the VED list to 788 names in 2021. 25 new drugs will be added to the list. The government updated the rules of making the list of vital and essential drugs (VED). A respective decree took effect on August 17, 2020. Another new option is that drugs can be put on the list under an accelerated procedure. This option is for drugs that are used for the treatment and prevention of deadly diseases and are included in recommendations and guidelines of the Ministry of Health of Russia. It is allowed to immediately add drugs to the list in case of imposition of the state of emergency and/or in case of risk of a spread of the mentioned diseases, COVID-19 among them.

The government added to the VED list the following drugs to treat the novel coronavirus infection: Favipiravir (film-coated tablets), Levilimab (solution for subcutaneous injection) and Olokizumab (solution for subcutaneous injection).

All existing COVID-19 vaccines (regardless of the name) were put on the list already in December 2020; the rest of the drugs will be added to the list in January 2021.

Only two lists will remain relevant: for High-Cost ICD codes and the minimum range of drugs for pharmacies.

The list of drugs for patients with rare diseases (High-Cost ICD) will be added from 2021 with 4 names: Taliglucerase alfa (Elyso), Ocrelizumab (Ocrevus), Simoctocog alfa (Nuwiq) and Emicizumab (Hemlibra).

The International Classification of Diseases (High-Cost ICD) program was launched in 2008 and in the beginning covered 7 codes and new drugs were added only for the defined groups. One of the recently emerging trends is to extend the list of diseases. In 2019, 5 other diseases were included in the program, and in 2020 – another 2 codes were added: aplastic anemia, unspecified, and inherited Factor II (fibrinogen), Factor VII (labile) and Factor X (Stuart-Prower factor) deficiency.

14 High-Cost ICD Codes (14 ICD Codes) is a federal national target program for the provision of high-cost drugs to patients with hemophilia, cystic fibrosis, malignant tumors of lymphoid, hematopoietic and related tissues, multiple sclerosis and other diseases that are not completely curable. This benefit-entitled category of the population is provided with treatment free of charge within the scope of the list of drugs approved by the government.

The domiciliary drug reimbursement program for patients with heart diseases, which was launched in 2020, has been extended until 2023 (Government Decree No. 2081 dated December 11, 2020). In 2021, over 10 billion roubles will be allocated from the federal budget to finance the program (10.15 billion roubles in 2020).

Under this program, patients who have had heart attacks and are subject to regular medical checkups receive drugs from the approved list (23 drugs) in pharmacies by subsidized prescriptions.

According to the DSM Group's estimates, the scope of the regional program is comparable to that of the federal one. The regional program is governed by Decree 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 Enhancement of Provision of the Population and Health Care Institutions with Medicines and Medical Products» and by regulatory and legal acts of the constituent entities of the Russian Federation – the budget and the regional public health development program. Purchases of orphan drugs make part of the program.

Constituent entities are autonomous in making lists of categories entitled to regional benefits. It is not a rare case when those entitled to regional benefits are also found on the lists of categories entitled to federal benefits.

In 2020, a total of 174 million drug packages worth 233 billion roubles were purchased for benefit-entitled social categories, which is more than in 2019 – by 8% in roubles and by 9% in packages. The analytical data show payments and supplies under contracts performed in 2020.

If reimbursement programs are analyzed individually, it can be seen that the scope of the regional benefits is augmenting: today, regional programs make for more than half the funds allocated to the subsidized segment. In 2020, the share of High-Cost ICD also grew, to 28%. On the contrary, the share of drugs under general ICD codes, which earlier had remained at 30%, declined in the current period to 18%.

In 2020, 65.0 billion roubles were spent on the High-Cost ICD program, which is 7.4% more than in 2019, and around 4.4 million packages were sold, which is 6.6% more compared to the previous year. The purchase volumes increased because in 2020 the High-Cost ICD Program was extended to 14 specific diseases.

In 2020, 41.3 billion roubles were spent under the Essential Drug Coverage program, which is 38.3% less than a year earlier. Decline was

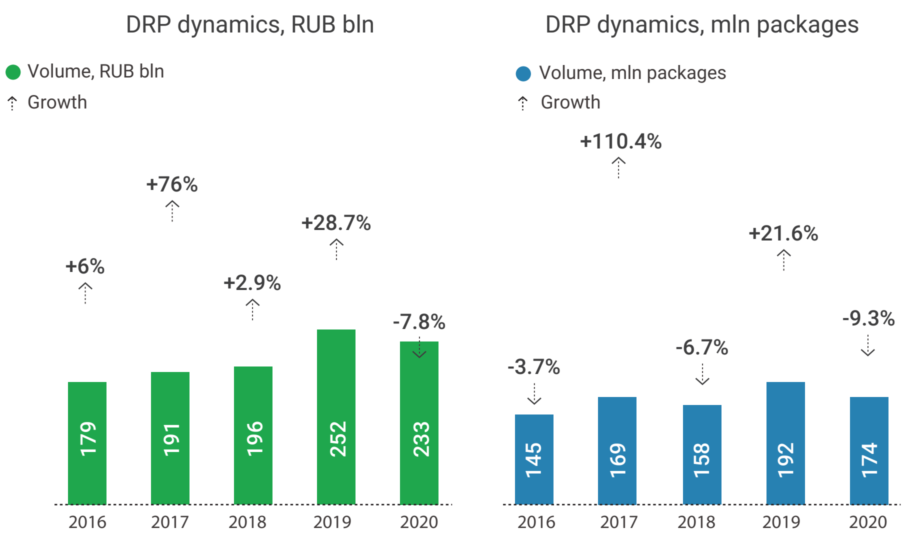


Figure 17

Drug Reimbursement Program dynamics, 2016-2020 observed also in volume terms, the number of purchased packages was 7.4% lower than in 2019 and the segment shrank in the end to 76.7 million packages.

Besides the federal scheme, there is also a territorial program financed at the expense of the regional budgets (procurement of orphan drugs is part of this program). This program envisages that drugs are provided for free or at a 50% discount. The scope of the regional benefits is comparable to that of the federal program. In 2020, it was even broader. In 2020, drugs purchased were worth 126.4 billion roubles (+1.2% against 2019), which equals 93.3 million packages (-11.4%).

Imported/domestic drug ratio in drug reimbursement

Pharma-2020 Strategy has proved that in addition to the already fine-tuned production of generics, a top priority for the industry is the substitution of imports of innovative drugs.

Most of the drugs purchased under DRP are original high-cost drugs, which in most cases are imported ones, and we observed that in 2020 their share in the total purchases increased. As a result, the share of localized drugs in value terms dropped by 1.6% (Fig. 19). At the same time, in volume terms the trend towards an increasing share of drugs made in Russia remains: in 2020, their share grew by 1%. Consumption of drugs made in Russia decreased by 11% in roubles and by 8% in packages. Costs on purchases of imported drugs were also below the level of 2019: by 5% in money and by 13% in packages.

So, in money terms the localized to imported drug ratio remains in favour of imported ones. In 2020, they accounted for 63% in value terms; drugs made in Russia made for 37% only.

The import substitution trends were first seen for drugs that are available and purchased mainly under reimbursement programs. That is why localized drugs account for the

Figure 18

Proportion of costs under High-Cost ICD, Essential Drug Coverage and Regional Reimbursement programs in the total value of spending in the subsidized drug segment, 2016-2020

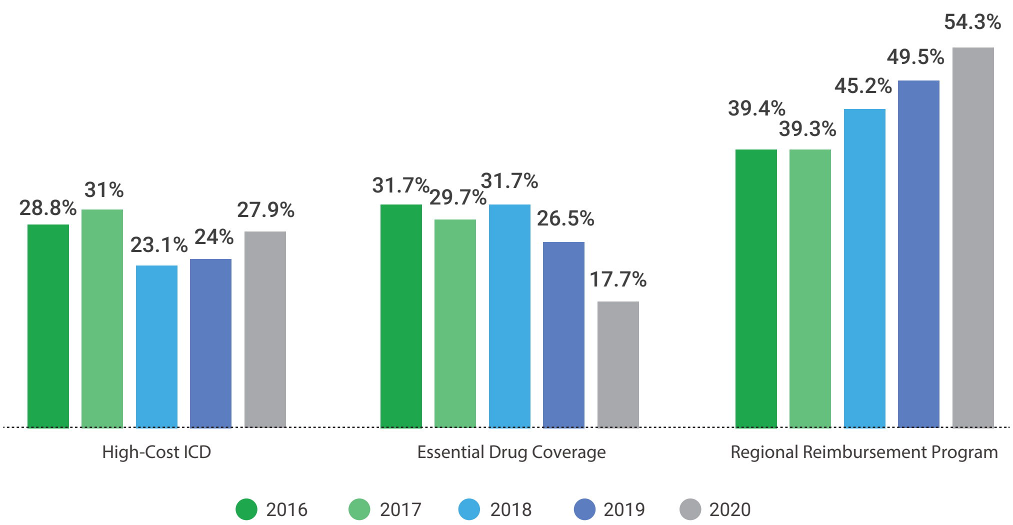
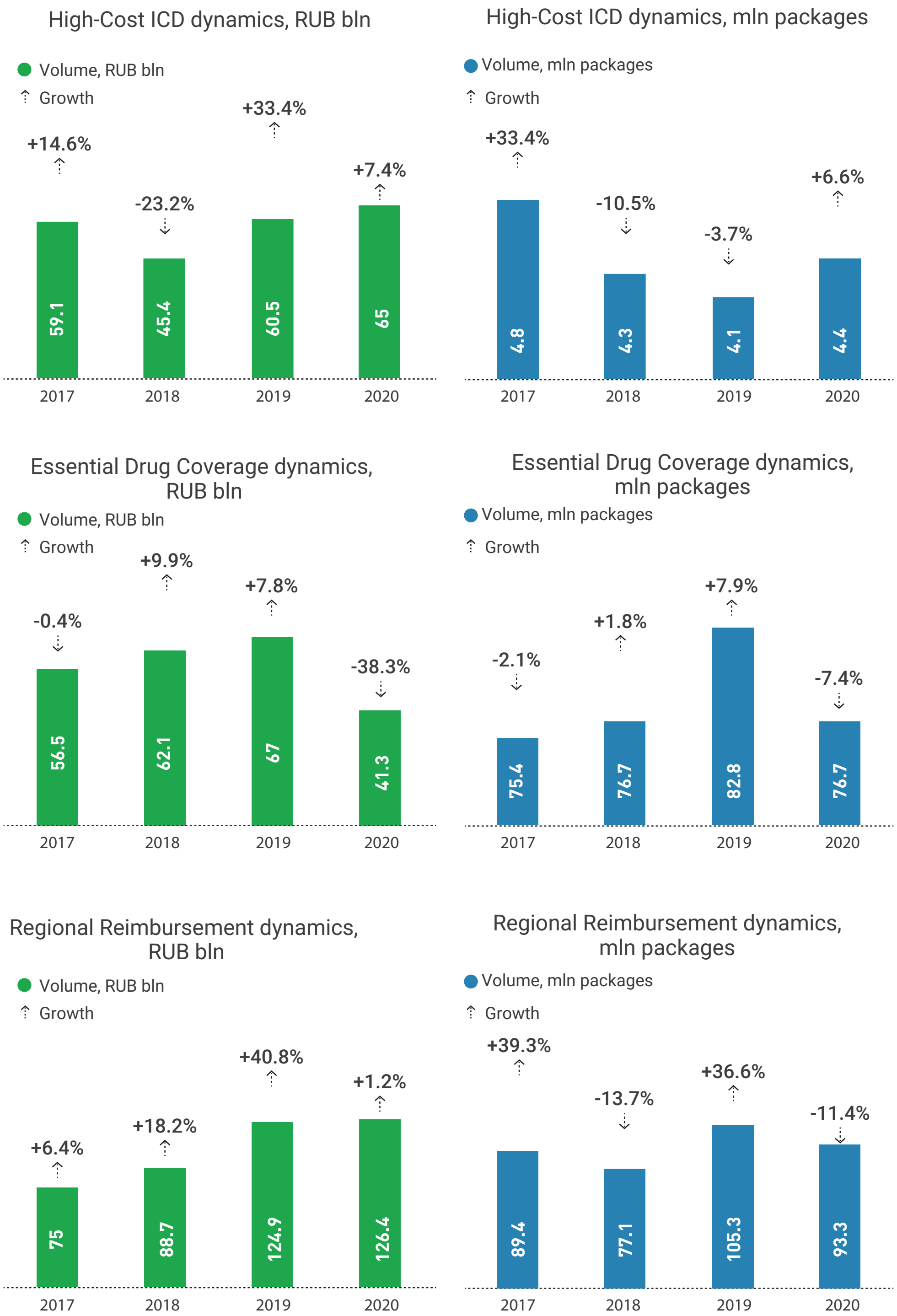


Figure 19

Dynamics of costs under reimbursement programs, 2017-2020



largest share in this segment. Excluding foreign drugs made in Russia, domestically-produced drugs would have accounted for 25.7% only. Thus, the process of «localization» drives the indicator up by 11%.

According to the data for 2020, the price of a localized drug was at 625 roubles and of an imported one was 3,894 roubles.

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

In DRP corresponding to high-cost codes, localized drugs remained at the level of 2019 and made for 33%. This is the segment where imported drugs hold the highest share, both in roubles (67%) and in packages (52%).

Under the Essential Drug Coverage program, the share of imported drugs decreased to come to around 50% in money (against 58% in 2019). In packages, localized drugs held about 82% of the market (like in 2019). So, the volumes of purchases of more expensive drugs made in Russia are growing.

In regional benefit programs, imported drugs prevail in money (66%, with their share increasing from 61% in 2019), in packages localized drugs account for 76%.

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.

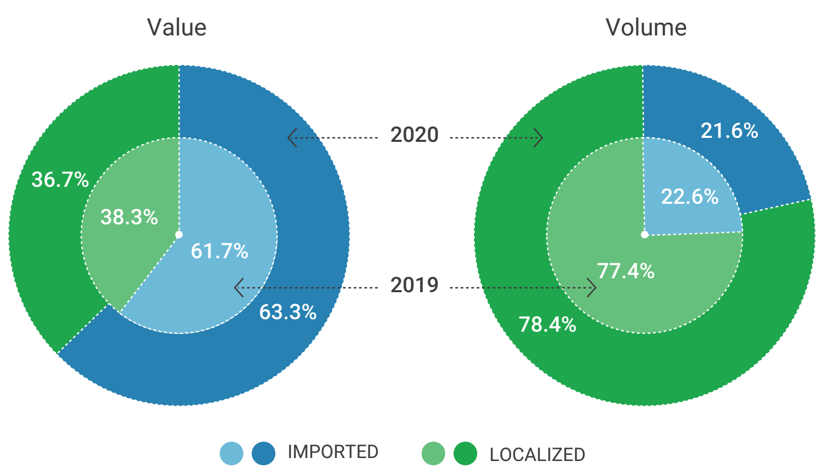
Three active substances out of the top 10 (Eculizumab, Imiglucerase and Teriflunomide) reflect a noticeable increase in the share of Russian drugs that in 2019 were already far ahead by purchase volumes within INNs. Among Russian companies, of special note are Generium, Geropharm and Biocad.

Rx/OTC drugs ratio in drug reimbursement programs

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

Figure 20

Imported/localized drug sales ratio, 2020



In 2020, Rx drugs accounted for 96.8% in value terms (+0.7% against 2019) and for 92.3% in volume terms (+0.8%).

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

The ratio of purchases in Russia under DRP by ATC codes, 1st level, for 2020 is shown in Table 9.

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

Drugs under [L] Antineoplastic and Immunomodulating Agents remain the most funded category under the DRP. In 2020, around 41.9% of the total public funds were spent on their purchases. This is the most high-priced drug group in DRP: the weighted average price per package is around 8,983 roubles. Owing to the appearance of domestic generics, this figure recently tends to decrease. In 2017, for example the per package price was at 10,202 roubles. Costs of their purchases decreased in roubles by 10.7% against 2019. In packages the drop was somewhat more noticeable: by 11.5%. In 2020, Celgene's Revlimid (INN-lenalidomide) remained the leader accounting for more than 10%, purchases of the immunosuppressive agent grew by 27.9%. Second- and third-ranking are Russian Generium's immunosuppressant Elizaria (INN-Eculizumab) and Johnson & Johnson's protein kinase inhibitor Imbruvica (INN-Ibrutinib). The drugs account for approximately 7% and 4% of the sales volumes in [L] by value.

The volumes falling within the second-ranking ATC code are half those of the leader. In 2020, it is [A] Alimentary Tract and Metabolism (21.7% in roubles). Dispensed amounts exceed those recorded in the previous year by 6.7% in roubles and by 19.3% in packages. About 70.7% of this category belong to drugs used in diabetes ([A10]). In 2020, 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 Takeda's Elaprase (INN-idursulfase) rank 2nd and 3rd, respectively.

The third-ranking is [B] Blood and Blood Forming Organs (15.2%). In 2020, [B] code demonstrated growth in volumes by 5.8% in

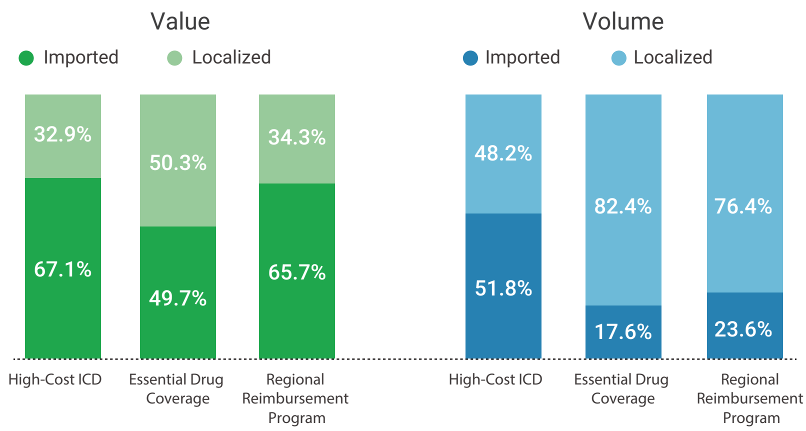


Figure 21

Imported/localized drugs sales ratio under sub-programs, 2020

Table 8

Top 10 INNs in terms of import substitution, 2020

INN	Share of domestic drugs in roubles, %		'Shift' drug in 2020	Leader 2019 (manufacturer)	'Shift' drug in 2020 (manufacturer)
	2019	2020			
Dornase alfa	**0.9%**	**97.2%**	**96.2%**	Pulmozyme (F.Hoffmann-La Roche)	Tigeraza (Generium)
Insulin Lispro	**1.2%**	**52.3%**	**51.2%**	Humalog (Eli Lilly)	RinLiz (Geropharm)
Eculizumab	**54.4%**	**99.9%**	**45.6%**	Elizaria (Generium)	Elizaria (Generium)
Adalimumab	**14.0%**	**50.0%**	**36.0%**	Humira (AbbVie)	Dalibra (Biocad)
Imiglucerase	**66.6%**	**98.4%**	**31.8%**	Glurazyme (Generium)	Glurazyme (Generium)
Abiraterone	**70.4%**	**99.1%**	**28.6%**	Zytiga (Johnson & John-son)	Abiraterone NV (Newvac), Abiraterone (Biocad), Abitera (Pharmasyntez)
Biphasic Insulin Lispro	**1.1%**	**28.7%**	**27.6%**	Humalog (Eli Lilly)	RinLiz (Geropharm)
Teriflunomide	**81.0%**	**99.9%**	**18.9%**	Femorix (Obninsk Chemical-Pharmaceutical Company)	Teriflunomide (Biocad)
Atorvastatin	**69.3%**	**87.7%**	**18.4%**	Atorvastatin (KRKA)	Atorvastatin (Ozon)
Salmeterol+ Fluticasone	**20.1%**	**38.3%**	**18.2%**	Seretide (GlaxoSmithKline)	Salticasone (Nativa), Respisalf (Rus Biopharm)

Table 9

Drug sales structure, by ATC codes, DRP market, 2020

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]	**97,561**	**41.9%**	**10.9**	**6.2%**
Alimentary tract and metabolism [A]	**50,506**	**21.7%**	**72.0**	**41.2%**
Blood and blood forming organs [B]	**35,533**	**15.2%**	**9.8**	**5.6%**
Respiratory system [R]	**9,600**	**4.1%**	**16.3**	**9.3%**
Nervous system [N]	**8,272**	**3.5%**	**19.3**	**11.1%**
Противомикробные препараты для системного использования [J]	**8,138**	**3.5%**	**3.7**	**2.1%**
Musculoskeletal system [M]	**7,495**	**3.2%**	**2.8**	**1.6%**
Cardiovascular system [C]	**6,881**	**3.0%**	**33.1**	**18.9%**
Systemic hormonal preparations, excluding sex hormones [H]	**4,853**	**2.1%**	**2.8**	**1.6%**
Various [V]	**2,515**	**1.1%**	**1.2**	**0.7%**
Non-ATC	**840**	**0.4%**	**0.1**	**0.1%**
Sensory organs [S]	**372**	**0.2%**	**1.9**	**1.1%**
Genitourinary system and sex hormones [G]	**239**	**0.1%**	**0.4**	**0.2%**
Dermatologicals [D]	**225**	**0.1%**	**0.3**	**0.2%**
Antiparasitic products, insecticides and repellents [P]]	**33**	**0.0%**	**0.1**	**0.1%**

value terms. In packages, purchases fell by 4.9%.

In the DRP structure, in 2020 [J] Antiinfectives for systemic use was no longer among the top five ATC codes: it was replaced by [R] Respiratory system. The share of the 5 key codes grew by 2.9% in value to come to around 86.4%. The highest growth of sales was observed in [A]: over the year, the code's share noticeably grew from 18.8% to 21.7%. Alimentary tract and metabolism drugs are sold mainly under Regional Reimbursement Programs and Essential Drug Coverage schemes.

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

Second year in a row, the top-ranking belongs to drugs used to treat malignant tumors since oncology has been recently set as a priority area. The leader accounts for 21.3% of the value of the entire DRP segment. 72.0% of drugs are dispensed under the Regional Drug Reimbursement program. In 2020, this group demonstrated negative dynamics – 17.9% against the previous period. Among other things, the drop was due to the shift in the procurement of these drugs to the hospital segment.

Drugs for the treatment of immunologic diseases rank second, their purchases also dropped, by 1.8%. Most of costs fall within the High-Cost ICD segment (63.9%).

In 2020, the third-ranking belongs to drugs used in diabetes, which were dispensed mainly on the regional level (68.8% in roubles).

Purchases of drugs for the treatment of musculoskeletal disorders (+166.9%) and skin diseases (+56.6%) grew more than of other drugs on account of the increased purchases of Spinraza used to treat spinal

Figure 22

DRP ratio of sales volume in value by ATC codes, 2020

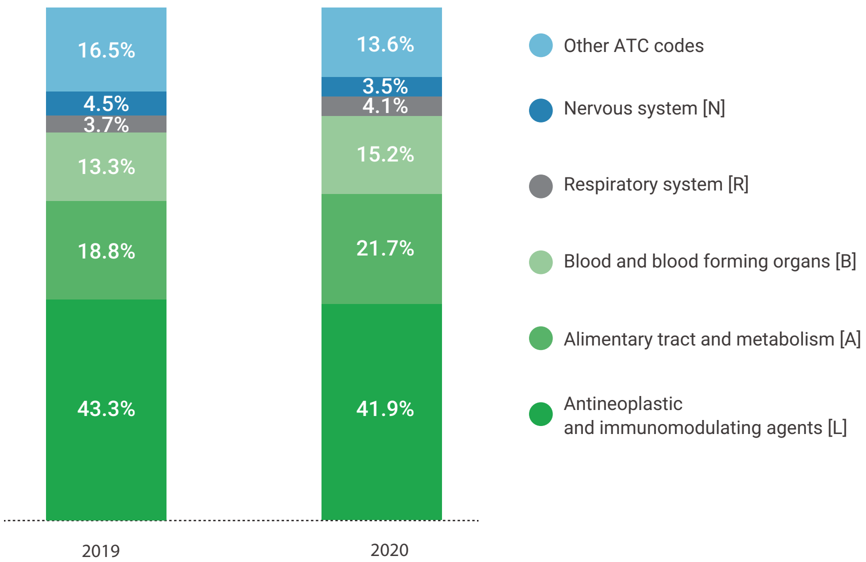


Table 10

DRP costs ranking by disease, in value terms, 2020

Disease	Purchase volume, mln roubles	Growth, %	Share, roubles, %		
			High-Cost ICD	Essential Drug Coverage	Regional Drug Reimbursement
Oncological diseases	49,749	-17.9%	17.0%	11.0%	72.0%
Immunologic diseases	47,812	-1.8%	63.9%	7.4%	28.7%
Diabetes mellitus	37,029	6.8%	0.0%	31.2%	68.8%
Diseases of blood and blood forming organs	35,301	6.7%	49.9%	13.6%	36.6%
Gastrointestinal diseases	14,609	11.3%	47.1%	10.6%	42.4%
Respiratory diseases	9,600	4.1%	13.3%	35.4%	51.3%
Nervous disorders	8,272	-26.8%	0.0%	34.5%	65.5%
Diseases caused by various infectious agents	8,162	-60.0%	0.0%	12.7%	87.3%
Musculoskeletal disorders	7,495	166.9%	0.0%	16.7%	83.3%
Cardiovascular diseases	5,535	1.6%	0.0%	32.3%	67.7%
Hormonal disorders	4,853	-8.6%	4.4%	47.3%	48.3%
Other	3,985	-41.6%	0.0%	49.8%	50.2%
Eye diseases	371	-44.2%	0.0%	20.7%	79.3%
Skin diseases	225	56.6%	0.0%	19.9%	80.1%
Male and female reproductive disorders	64	-43.8%	0.0%	37.5%	62.5%

Table 11

Top 20 drug manufacturers by DRP consumption, 2020

Ranking	Change against 2019	Manufacturer	Purchase volume, mln roubles	Share, %	Growth, % 2020/2019
1	-	Johnson & Johnson	**15,812**	**4.4%**	**-1.5%**
2	+2	Generium	**15,523**	**3.1%**	**20.5%**
3	-	Novartis	**13,415**	**2.9%**	**3.2%**
4	-2	Sanofi	**12,939**	**2.3%**	**-12.9%**
5	+4	Celgene	**12,082**	**1.7%**	**29.8%**
6	-	Novo Nordisk	**10,200**	**1.5%**	**0.2%**
7	-2	Biocad	**9,386**	**1.5%**	**-11.7%**
8	-1	AstraZeneca	**8,760**	**1.4%**	**-10.2%**
9	-1	Baxter	**7,889**	**1.4%**	**-17.0%**
10	-	Pfizer	**6,960**	**1.3%**	**-21.7%**
11	+3	Takeda	**6,170**	**1.3%**	**-3.0%**
12	+141	Biogen	**5,424**	**1.3%**	**11 490.7%**
13	+6	Bayer	**5,335**	**1.2%**	**38.7%**
14	-2	GlaxoSmithKline	**5,289**	**1.1%**	**-29.1%**
15	-4	F.Hoffmann-La Roche	**5,215**	**1.1%**	**-34.5%**
16	+4	Boehringer Ingelheim	**4,865**	**1.0%**	**26.9%**
17	+4	Octapharma	**4,672**	**0.9%**	**24.2%**
18	-5	Nativa	**4,527**	**0.9%**	**-38.8%**
19	-4	Merck & Co	**4,128**	**0.8%**	**-33.8%**
20	+7	Astellas	**3,662**	**0.8%**	**30.1%**

muscular atrophy and interleukin inhibitor Dupixent, respectively. 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 the DRP in 2020.

In 2020, drugs under the Drug Reimbursement Program were purchased from 496 manufacturers. Only 35 companies are involved in the High-Cost ICD program; 254 participate in the Essential Drug Coverage schemes; regionally subsidized drugs are purchased from 483 companies. This is due to the fact that lists of drugs under High-Cost ICD and Essential Drug Coverage programs are legislatively regulated whereas lists of regionally subsidized drugs are made 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. Ranks of the others changed. The top rated, like in 2019, is Johnson & Johnson holding a 4.4% share despite the 1.5% decrease (against the previous year) in purchases of drugs from its portfolio. The range of drugs purchased under subsidized and reimbursement programs shrank from 43 to 37 brands. There was a drop in sales of 7 out of the 10 key brands of the company. The biggest drops in purchases were observed for Tecfidera used in the treatment of relapsing-remitting multiple sclerosis (-38.6% against 2019) and Xeplion used in the treatment of schizophrenia (-34.2%). Purchases of antineoplastic agent Darzalex grew by 849.2%.

Russian Generium (3.1% of subsidized drugs) moved up to rank second, having increased its sales by 20.5% over the year. The bio-engineering company intends to produce analogues 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 Tigeraza, which is the analogue of mucolytic agent Pulmozyme (made by F.Hoffmann-La Roche), has the same INN-Dornase alfa and is purchased mainly under the 14 ICD Codes program.

Ranking third in 2020 is Novartis (2.9%). The manufacturer's sales volumes for the year grew by 3.2%. The most demanded were chelator Dzhadenu (+543.5%) and antineoplastic Risarg (+241.1%) used in the treatment of female breast cancer.

The manufacturer that gained in the ranking most of all was Biogen with its high-cost Spinraza for patients with spinal muscular atrophy (SMA) (+141 position lines; +11,490.7%).

At the end of 2020, thanks to the import substitution scheme there were three 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 programs.

Generium came out on top in the 14 ICD Codes program; top-rated in the Essential Drug Coverage and Regional Drug Reimbursement programs are Sanofi and Johnson & Johnson. More than 3 Russian manufacturers participate in each of the sub-programs; most Russian manufacturers

Table 12

Top 20 drug manufacturers by purchase volumes in DRP segment under High-Cost ICD, Essential Drug Coverage and Regional Drug Reimbursement programs, 2020

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	**11,484**	Sanofi	**3,527**	Johnson & Johnson	**9,044**
2	Celgene	**10,021**	Novo Nordisk	**3,420**	Sanofi	**8,180**
3	Biocad	**6,480**	Novartis	**3,296**	Novartis	**7,965**
4	Baxter	**6,419**	Boehringer Ingelheim	**1,848**	AstraZeneca	**7,120**
5	Johnson & Johnson	**5,786**	AstraZeneca	**1,641**	Novo Nordisk	**6,581**
6	Octapharma	**4,394**	Nativa	**1,493**	Pfizer	**5,446**
7	Takeda	**3,781**	Bayer	**1,384**	Biogen	**5,260**
8	Novartis	**2,153**	Pharmstandard	**1,235**	GlaxoSmithKline	**4,804**
9	Merck & Co	**1,899**	Sotex	**1,142**	Generium	**4,024**
10	Catalent	**1,502**	Fresenius	**1,091**	Bayer	**3,951**
11	CSL Behring	**1,421**	Johnson & Johnson	**982**	F.Hoffmann-La Roche	**3,728**
12	Sanofi	**1,231**	Geropharm	**955**	Boehringer Ingelheim	**3,017**
13	Astellas	**1,182**	Ozon	**880**	Amgen	**2,959**
14	CinnaGen	**1,176**	F.Hoffmann-La Roche	**875**	Nativa	**2,656**
15	Dr. Reddy's	**1,136**	Pfizer	**815**	Takeda	**2,207**
16	Pfizer	**699**	Pharm-Sintez (Moscow)	**778**	Biocad	**2,136**
17	Pharmasyntez	**655**	Biocad	**770**	AbbVie	**2,098**
18	F.Hoffmann-La Roche	**613**	Ipsen	**759**	Merck & Co	**1,991**
19	AbbVie	**527**	Astellas	**665**	Celgene	**1,976**
20	Kedrion	**505**	Canonpharma Production	**609**	Pharmasyntez	**1,908**

are found among the top 20 manufacturers of drugs under the Essential Drug Coverage scheme (8 companies).

Drugs in the DRP segment

Table 13 shows the top 20 brands leading by the purchase volume in the DRP in 2020.

In 2020, the top 20 brands accounted for 31.9% of the value volume, which is 4% more than a year earlier.

As before, the top-ranking in value is foreign-made Celgene's immunosuppressive agent Revlimid (+27.9% against 2019). A novelty of 2019 – Generium's immunosuppressant Elizaria (+42.6%) moved up to rank second. Sanofi's long-acting insulin analogue Toujeo SoloStar (+10.6%) ranks third.

The rating of 2020 changed dramatically. Seven drugs out of the top twenty are seen in the rating for the first time. The most successful among the ranked drugs are: Biogen's high-cost Spinraza (+498 position lines) for patients with SMA; Johnson & Johnson's antineoplastic agent Darzalex (+174) used in the monotherapy of relapsed and refractory multiple myeloma; Merck & Co's immunostimulant Rebif (+54) for the treatment of multiple sclerosis. These are the brands that ultimately had the highest rate of growth in purchase volumes (+11,490.7%, +849.2%, and +113.3%, respectively).

The weighted average price in the top 20 brands was about 7,638 roubles/package. A notable increase in the price compared with the previous year is due to the procurement of high-cost intrathecal Spinraza for SMA patients: the weighted average price is about 2 million roubles per package. The «cheapest» from the top 20 was antihyperglycaemic agent Novorapid (around 1.5 thousand roubles).

Most of the leading drugs belong to [L] Antineoplastic and Immunomodulating Agents (9 brands). Second comes [B] Blood and Blood Forming Organs with 6 brands. The third-ranking in this respect is [A] Alimentary Tract and Metabolism (4 brands).

Most of the ranked brands are drugs dispensed under the 14 ICD Codes program (12 brands). Involvement in the High-Cost ICD program does not exclude regional provision; sometimes, even more money is spent on regional benefits. An example of this is Elizaria (53% to 47% in favour of regional drug reimbursement).

Drugs from the Essential Drug Coverage list are frequently dispensed in the same volumes also under regional benefits. That is why Essential Drug Coverage and Regional Drug Reimbursement ratings are alike.

DRP price segmentation

In 2020, the average per unit price under the DRP program increased over the year by 1.4% to come to around 1,332 roubles. In terms of sub-programs, the most expensive drugs are in the High-Cost ICD segment: the average price paid by the state per package is 14.9 thousand roubles (+0.8% against 2019). Most of all, the price grew under the regional disbursement programs: 1,355 roubles (+14.3%). The cheapest are drugs purchased under the Essential Drug Coverage program: 539 roubles (-33.5%).

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

Table 13

Top 20 brands by DRP purchase value, 2020

Ranking	Change against 2019	Brand	Manufacturer	Purchase volume, mln roubles	Share, %	Growth, % 2020/2019
1	-	Revlimid	Celgene	**10,269**	**4.4%**	**27.9%**
2	+1	Elizaria	Generium	**7,156**	**3.1%**	**42.6%**
3	-1	Toujeo SoloStar	Sanofi	**6,837**	**2.9%**	**10.6%**
4	+498	Spinraza	Biogen	**5,424**	**2.3%**	**11,490.7%**
5	-	Imbruvica	Johnson & Johnson	**3,920**	**1.7%**	**-4.4%**
6	-	Levemir	Novo Nordisk	**3,575**	**1.5%**	**1.5%**
7	+1	Elaprase	Takeda	**3,433**	**1.5%**	**1.4%**
8	+2	Acellbia	Biocad	**3,206**	**1.4%**	**4.9%**
9	+21	Xarelto	Bayer	**3,166**	**1.4%**	**102.0%**
10	-1	Novorapid	Novo Nordisk	**3,065**	**1.3%**	**-3.7%**
11	-	Feiba	Baxter	**3,012**	**1.3%**	**4.1%**
12	+174	Darzalex	Johnson & Johnson	**2,958**	**1.3%**	**849.2%**
13	-6	Advate	Baxter	**2,839**	**1.2%**	**-17.6%**
14	+3	Coagil	Generium	**2,537**	**1.1%**	**8.7%**
15	-3	Afinitor	Novartis	**2,450**	**1.1%**	**-13.5%**
16	+13	Octanat	Octapharma	**2,375**	**1.0%**	**48.7%**
17	+36	Xtandi	Astellas	**2,134**	**0.9%**	**92.0%**
18	-5	Tizabri	Johnson & Johnson	**2,026**	**0.9%**	**-23.3%**
19	+3	Nplate	Amgen	**1,961**	**0.8%**	**-5.1%**
20	+54	Rebif	Merck & Co	**1,923**	**0.8%**	**113.3%**

Table 14

Top 20 brands by DRP purchase volumes under High-Cost ICD, Essential Drug Coverage and Regional Drug Reimbursement programs, 2020

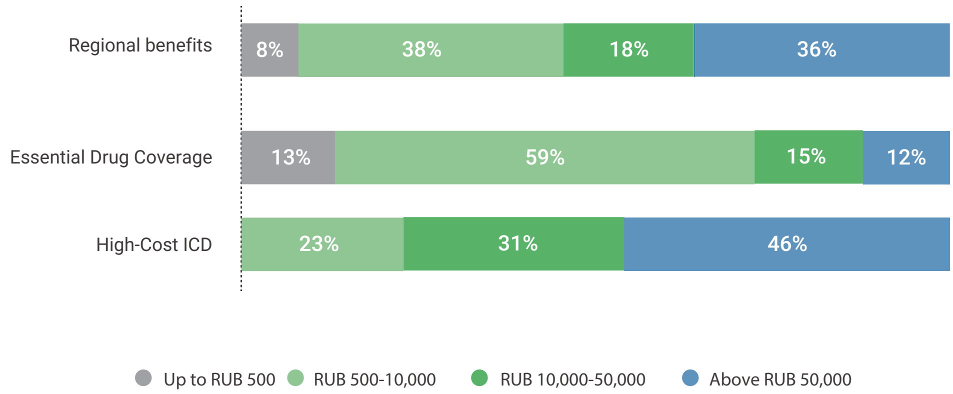
Ranking	High-Cost ICD		Essential Drug Coverage		Regional Drug Reimbursement	
	Brand	Purchase volume, mln roubles	Brand	Purchase volume, mln roubles	Brand	Purchase volume, mln roubles
1	Revlimid	**10,021**	Toujeo SoloStar	**2,375**	Spinraza	**5,260**
2	Elaprase	**3,424**	Novorapid	**1,133**	Toujeo SoloStar	**4,462**
3	Elizaria	**3,343**	Ketosteril	**1,071**	Imbruvica	**3,844**
4	Acellbia	**2,950**	Levemir	**1,053**	Elizaria	**3,813**
5	Feiba	**2,911**	Octreotide	**999**	Levemir	**2,522**
6	Advate	**2,801**	Xarelto	**964**	Xarelto	**2,202**
7	Darzalex	**2,542**	Eralfon	**812**	Nplate	**1,945**
8	Coagil	**2,463**	Spiriva	**590**	Novorapid	**1,932**
9	Octanat	**2,368**	Apidra	**576**	Tafinlar	**1,880**
10	Tizabri	**2,020**	Tasigna	**572**	Linparza	**1,758**
11	Rebif	**1,899**	Tresiba	**557**	Xtandi	**1,597**
12	Octofactor	**1,676**	Xtandi	**537**	Afinitor	**1,549**
13	Infibeta	**1,641**	Mircera	**530**	Imnovid	**1,320**
14	Naglazym	**1,502**	Simponi	**530**	Galvus	**1,258**
15	Vilate	**1,470**	Novomix	**503**	Forxiga	**1,177**
16	Tigeraza	**1,273**	Jardins	**489**	Eviplera	**1,060**
17	Plegridy	**1,224**	Jaakafi	**479**	Revolade	**1,016**
18	Advagraf	**1,180**	Rosinsuline	**470**	Tasigna	**995**
19	Cinnovex	**1,176**	Symbicort	**422**	Metformin	**977**
20	Reddytux	**1,136**	Biosulin	**417**	Apidra	**958**

In the High-Cost ICD program, drugs priced below RUB 500 account for less than 1% in roubles in the total purchases in the segment. Yet, this is the price category that grew most in purchase volumes against the previous year (+39.6% in roubles and +25.6% in packages). Purchase volumes dropped only in the «RUB 10,000-50,000» segment.

In the Essential Drug Coverage schemes most of all decreased purchases of high-cost drugs, whereas the regional programs see a reverse trend: regional budgets spend more money on purchasing innovative drugs (including Spinraza for SMA treatment).

Figure 23

DRP structure in value terms, by price segment, 2020



4. Volumes of purchases of drugs for needs of HCI

It seems like the help came in time. As always... because if it comes at the wrong time, it is no longer a help.

Sergey Lukiyanenko

The World Health Organization directly conditions the average life expectancy on the overall health-care expenditure per capita. The WHO is assigned to play a key role in the organization of international initiatives aimed at improving the quality of life of older people within the framework of the 2021-2030 Decade of Healthy Ageing proclaimed by the UN. Middle-aged and older people are at greater risk during the pandemic of the novel coronavirus infection, which reveals the bottlenecks and drawbacks in the healthcare system. In 2019, according to Rosstat (the Federal State Statistics Service) life expectancy at birth in Russia was 73.34 years. According to preliminary estimates, in 2020 this figure went down to 71 years. So, the positive trends that had emerged in the recent years were levelled off by Covid-19.

Negative dynamics was observed also in the demographic indicators such as death and birth rates, and healthy life expectancy. For example, birth rates decreased from 1,484.5 thousand people to 1,435.8 thousand people (-48.7 thousand). The healthy life expectancy in Russia decreased by almost 5 years (63.7 years in 2019, against 58.9 years in 2020). The number of people who died in 2020 increased noteworthily to come to 2,124.5 thousand people, which is by 323.8 thousand more than a year earlier. Such highly negative dynamics was last recorded in 1993. Certainly, among the factors underlying this figure is also the pandemic (around 32% are due to Covid-19 and associated diseases), the restrictive measures that were taken to prevent the pandemic, and the aggravating economic situation on the whole.

As a result, also the overall population of Russia declined: from 146.7 million to 145.9 million people.

So, it is not surprising that the main program launched as the vector for the development of the industry envisages the demographic indicators that need improving. The key health care objectives cover, in the first place, facilitating access to medical care, reducing incidence and mortality rates and, as a result, improving life quality.

From 2019 the «Health Development» national program is implemented under 8 federal projects: In 2020, the national program includes two federal projects to be implemented under the Demography national project: Public Health Strengthening and Older Generations.

In 2021-2023, 2.8 trillion roubles are planned to be allocated for the implementation of the «Health Development» national program.

Budget appropriations in 2021 will come to 965.1 billion roubles, in 2022 – to 947.4 billion roubles, and in 2023 – to 911.5 billion roubles.

Healthcare expenditures covered by the federal budget of the Russian Federation for 2021 and for the target period of 2022 and 2023 exceed 3.3 trillion roubles (Federal Law No. 385-FZ dated December 8, 2020). In 2021, budget appropriations for the Healthcare sector will amount to 1,123.3 billion roubles, in 2022 – to 1,112.8 billion roubles, and in 2023 – to 1,081.3 billion roubles.

According to Rosstat, at the beginning of 2020 the Russian health system comprised 5.1 thousand hospitals and 21.2 thousand outpatient clinics and facilities and 2.2 thousand ambulance stations (units). Over 17 years, the number of hospitals decreased two-fold. The pandemic has highlighted the existing problems concerning the optimization of the healthcare system, which caused shortages of bed capacities: the number of hospital beds decreased by 27.5% compared to 2003 (from 1,619.7 thousand to 1,173.6 thousand). The number of ambulance stations decreased by 32.0% against 2003, which affected access to healthcare and medicines. It triggered a reverse process, which started in 2013: in 7 years, the number of outpatient clinics, medical and obstetric centres and general practitioner's offices in rural areas increased by 4.7 thousand.

But the reduction in the number of hospital institutions led to reductions of medical staff. In 2020, the number of middle-grade medical staff was slightly below the number of the previous year (1,491.3 thousand) whereas the number of doctors grew by 1.5% to 714.6 thousand.

Another trend observed in the hospital segment in 2020 was the outflow of medical staff from regions to big cities where hospitals offer a higher pay. Only in the 1st half of 2020, the number of medical workers in Moscow and in the Moscow region grew by 3.3 thousand people, and most of those medical workers are doctors. In the second largest federal city, Saint Petersburg, the number of medical workers grew in the first half of 2020 in total by 1.9% (1.5 thousand people, 944 of them – doctors). Another reason for the staffing shortages was high rates of incidence among medical staff. There were problems with the provision of medical staff with PPE. Scheduled visits were suspended, and the targets for 2020 remained unfulfilled.

In this context, the performance targets envisaged for 2020 in the federal project on Supply of Health Care Institutions with Skilled Staff failed to be delivered on.

Because of the pandemic of the coronavirus, the launch of the program on the modernization of the primary care setting was postponed from July 1, 2020 to the beginning of 2021. The program aims, in the first place, at promoting access to healthcare for residents of small inhabited localities and remote areas. The pandemic highlighted all deficiencies in the primary healthcare system, which had to take the hardest blow. In addition to the problems with the enhancement and upgrade of the physical infrastructure, an urgent concern is the staffing shortage. 500 billion roubles are planned to be allocated for the implementation of the programs from the federal budget, and over 50 billion roubles – from the regional budgets.

Digitalization is a top-priority objective of the Healthcare national project. The integration of the Uniform State Health Information System started back in 2011-2012 by connecting healthcare institutions to the automated systems: creation of a federal Data Centre and its regional fragments. The overall budget of the project on creating a unified digital contour through to 2024 will amount to 177.7 billion roubles as part of the Healthcare national project.

In 2020, the government additionally allocated around 898.59 million roubles from the reserve fund for the digitalization of public healthcare services (Russian Government's Order No. 2897-r dated November 7, 2020). The funds will accelerate the process of the conversion of public services that are essential for the population into digital services offered in electronic format.

From October 25, pharmacies were allowed to dispense drugs by electronic prescriptions, as per Order of the Ministry of Health of Russia No. 683n dated July 7, 2020. The order defined a list of drugs and modes of their dispensing by electronic prescriptions.

An electronic prescription is required to be certified with a medical officer's signature. Regions must authorize the use of such prescriptions. Drugs may be dispensed by e-prescriptions that have been issued in the territory of the region, in which a pharmacy connected to the Uniform State Health Information System is located. Besides e-prescriptions, the Gosuslugi (Public Services) portal offers electronic hospital services.

The e-prescription system and the automated pharmaceutical benefits scheme are expected to start working on a full scale by 2024. By the end of 2021, all federal clinics are required to be fully integrated in the Uniform State Health Information System (Letter of the Ministry of Health No. 18-0/150). The Bakulev Center for Cardiovascular Surgery and the Fyodorov Eye Microsurgery Complex were among the first to get connected to the information system.

As of July 1, drugs in Russia had to be labelled. As the supply chain was overloaded, the system failed, and it was decided to allow drug labelling on a notification basis. For hospitals, the «15-minute rule» will have no limit in time.

One of the expenditure items in the overall health care spending is procurement of drugs for the needs of healthcare institutions (HCI). In 2020, the hospital segment of the pharmaceutical market demonstrated the highest growth in purchase volumes for the last few years. By the end of the year, HCI purchased 841.7 million packages of drugs worth 400.7 billion roubles in wholesale prices (the analytical data reflect payments and supplies under contracts performed in 2020). Compared to 2019, expenditures of hospitals exceeded public spending by 23.6%. The volume of packages purchased decreased by 11.8%.

All of the trends observed in 2020 were conditioned on the pandemic of the coronavirus and also on increased volumes of funding on the federal programs, in particular, on oncology and on heart disease prevention.

In March, the Ministry of Health included in the COVID-19 treatment schemes antimalarial drugs (Hydroxychloroquine, Mefloquine and Chloroquine) for purposes of prevention, in case of contacts with infected persons, and for patients in mild, moderate and severe conditions, younger than 60 years old and without associated chronic diseases. In consequence, purchases of ATC [P01B] drugs jumped up against 2019 – by 14,734.7%. Later, however, numerous foreign publications and also Russian studies proved that Hydroxychloroquine was not effective in severely ill patients.

A cytokine storm is observed at an advanced stage of the disease, is marked by an aggressive innate immune response when excessive amounts of cytokines are released, which causes inflammations and immune system disorders. Hospital purchases of corticosteroids for systemic use (for example, Dexamethasone, Methylprednisolone) and immunosuppressants (Tocilizumab, Sarilumab) prescribed to suppress the cytokine storm grew over the year by 38.1% and by 73.3%, respectively.

Another possible side effect of the release of cytokines is coagulation derangement. The antithrombotic therapy for hospital patients used antithrombotic agents (their purchases grew by 97.5% against 2019). 17.6% of purchases of ATC [B01] came from INN Enoxaparin sodium (+67.7%).

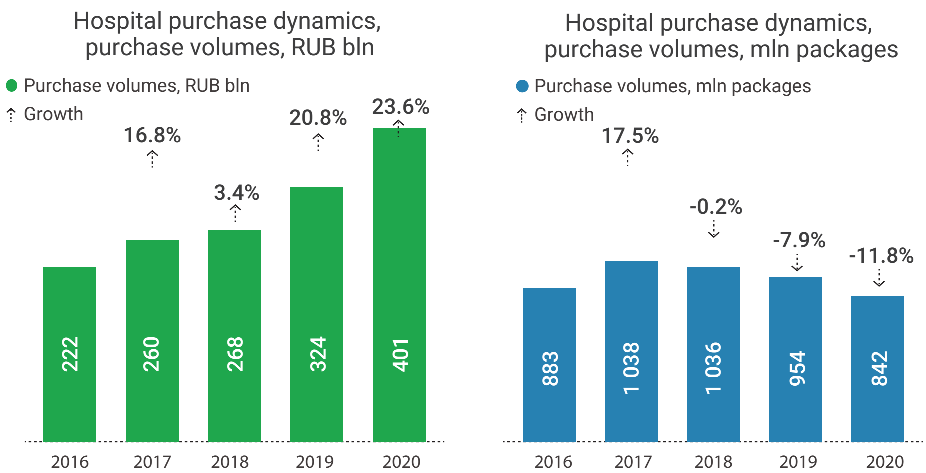
Symptomatic treatments use cold and cough drugs (+52.7%; for example, INN Ambroxol, Acetylcysteine), other antipyretic analgesics (+13.5%; purchases of drugs under INN Patacetamol grew by 33.9%), nasal medications for rhinitis and/or nasopharyngitis (+96.9%; for example, Xylomethazoline).

Complicated cases of the coronavirus infection are treated by using non-specific antibacterial therapies (sales of ATC [J01] grew by 41.0%) if there are strong signs of a secondary bacterial infection. The antibiotics recommended for the treatment of Covid-19 included 6 INNs (Azithromycin, Amoxycillin, Amoxycillin+Clavulanic acid, Clarithromycin, Levofloxacin, Moxifloxacin) – in 2020, purchases of these drugs grew two-fold.

Among antiviral drugs, of particular mention are drugs with the Umifenovir active ingredient – their sales grew over the year by 493.1%. Four brands of this INN were purchased: Arbidol, Arpeflu, Umifenovir and Afludol. Sales of Favipiravir (Coronavir, Avifavir and Areplivir brands) that clinics started purchasing in

Figure 24

Hospital purchase dynamics, 2016-2020



the summer totalled in 2020 2,436.9 million roubles.

The growth of the hospital segment is, in the first place, on account of the increase in the purchases of expensive antineoplastic agents (+39% in roubles and +22.6% in packages) within the framework of the implementation of the national oncology program.

Cancer is the second leading cause of death, after circulatory diseases. According to Rosstat, in 2019 cancer claimed 298.7 thousand victims.

The upward trends in the structure of purchases in favour of drugs for the treatment of oncological diseases triggered a notable increase in the weighted average per unit price of drugs purchased for the needs of clinics. In 2020, the price was 476 roubles, which is 40.1% higher than a year earlier. Speaking about variation in prices, the hospital system is marked by deflation processes. In 2020, the price index for drugs purchased through tendering was negative, -7% (i.e. on buying drugs purchased in 2019 at 2020 prices, one spends 7% less). Weighted average prices tend to decrease also in the segment of the most popular drugs: 13 brands of top 20 were purchased at lower prices. The maximum decrease in the price was observed for F.Hoffmann-La Roche's antineoplastic agent Kadcyla (INN Trastuzumab emtansine): in 2020, its weighted average price was by 30.4% lower than in 2019.

High growth rates were observed also in the purchases under the National Vaccination Schedule: +43%. In 2021, the funding of this sector can substantially increase as the list of purchased vaccines has been added with the vaccine to prevent the novel coronavirus infection, with the average per-dose registered price at RUB 1,942.

Another driver for the growth of hospital purchases was the federal project on fighting heart diseases. 9.6 billion roubles were spent under the project on purchasing the necessary drugs. The main purpose of the project is to reduce by one fourth the death rates from heart attacks, brain attacks and other vascular abnormalities.

Thus, the increased spending on purchases of drugs is due to the epidemiological situation in the country and the expansion of financially intensive tenders held within the framework of the federal programs.

All this is sure to influence the structure of hospital purchases.

One of the trends of the recent years is a shift to drugs made in Russia because such items are given preference in tendering, both for being put in tenders and for prices. The trend stems from the process of import substitution that has been evolving in two ways: a direct shift to domestically-produced drugs and localization of foreign manufacturers in Russia.

In 2020, due to the growing purchases of «expensive» drugs, the trend was no longer observed.

In the reporting period, the distribution of volumes in monetary terms in the HCI segment shifted towards foreign-made drugs. Over the year, the share of imported drugs grew by 1.7% in roubles to 53.9%. Though in packages, the share appeared to be re-distributed in favour of localized drugs (domestically-produced drugs and those made by foreign manufacturers in Russia) to come to 83.8% (a 0.6% increase).

Whereas amounts of purchased packages decreased, both in the group of localized (-11.1%) and imported drugs (-15.4%), expenditures significantly grew.

Purchases of drugs made in Russia grew in 2020 by 19%. High growth rates were observed for the vaccines Ultrix (+655.5% against 2019) and Sovigripp (+56.8%) and for the antineoplastic drug Acellbia (+88.9%).

The dynamics of sales of imported drugs (+28% in roubles) was mostly on account of the purchases of the antineoplastic agents Tecentriq (+221.0% against 2019), Opdivo (+101.1%) and Keytruda (+99.6%).

At the end of 2020, the weighted average per unit price of a foreign drug was 1,586 roubles, which is by 50.7% higher than a year earlier. The average price of localized drugs grew by 34.0% to come to 262 roubles per package; still, it is far behind (by more than six-fold) the price of foreign drugs.

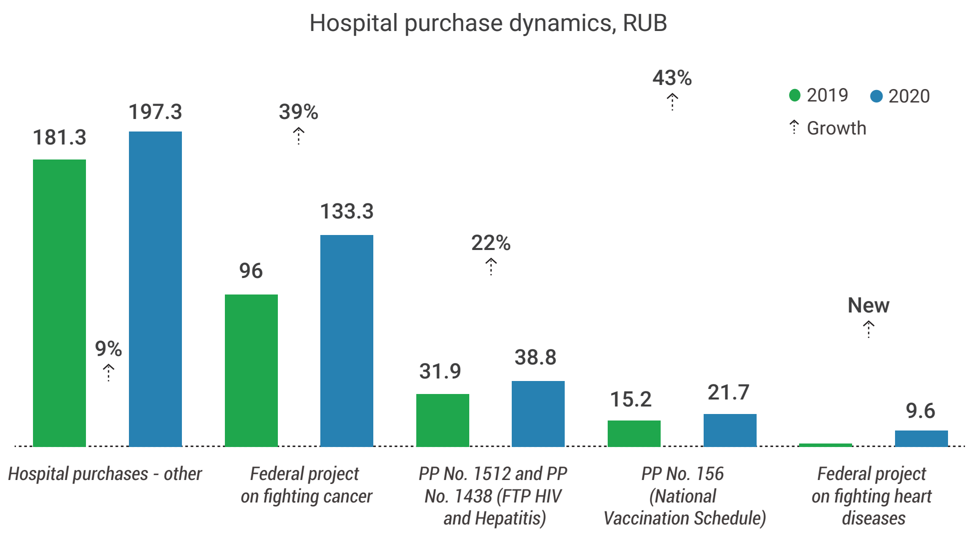
Among the leading foreign manufacturers that are now making drugs in Russia are Merck (13.6%), F.Hoffmann-La Roche (11.1%) and Pfizer (10.5%). Most of the localized drugs are antineoplastic and antimicrobial drugs.

Though in 2020 more funds were allocated to 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 68.2% of all hospital purchases in money).

In 2020, the INNs put on the list differed from those listed in 2019. So, each year the import substitution trends cover more and more nomenclature items. Three INNs are found in the rating by the growth of the share of domestic drugs: in the previous year, the best-seller among them was a Russian drug (colour-marked), the growth was due to increased purchase volumes or to the fact

Figure 25

Dynamics of hospital purchases under programs



that several other domestic drugs were added to the procurement list.

The new INNs – the antiviral Favipiravir (Coronavir brand of R-Pharm, Avifavir from Chromis, Areplivir from Promomed Rus) and the antineoplastic drug Olokizumab (Artlegia from R-Pharm) – are represented by the Russian brands only.

According to the data for 2020, Russian drugs exceed 90% in 709 INNs out of 2,081 INNs purchased by hospitals. And there are 922 INNs in which imported drugs prevail (accounting for over 90% in purchases); 49 of them are in the top 100 by volume. Among the most intensive INNs represented only by imported drugs remain: the vaccine to prevent diphtheria, pertussis, poliomyelitis, tetanus and infections caused by haemophilus influenzae type B, and the antineoplastic agents Nivolumab and Pembrolizumab – these three INNs account for 10.1% of hospital purchases.

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

In 2020, variations in the price structure of purchases were within ±1.3%. In the price categories «RUB 150-500» and «More than RUB 500», there was an increase in the share of purchases of drugs for HCI by 1.0% and 0.9%, respectively. Preference 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 56.3%. In 2020, the share of this price range significantly decreased by 9.9% compared to 2019. As before, among the most purchased are INN-Sodium chloride

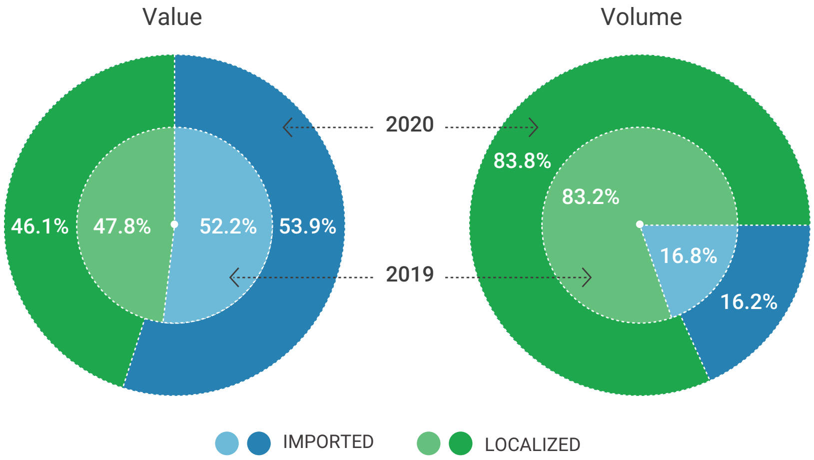


Figure 26

HCI segment structure, by origin

Table 15

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

Ranking	INN	Share of domestic drugs, roubles 2019	Share of domestic drugs, roubles 2020	Share growth, %	Top-selling drug (manufacturer), 2019	'Shift-to' drug (manufacturer), 2020
1	Pazopanib	**0%**	**39.6%**	**39.6%**	Votrient (GlaxoSmithKline)	Potarbin (Chemical Diversity Research Institute)
2	Umifenovir	**41.5%**	**76.5%**	**35.0%**	Arpeflu (Lekpharm, Belarus)	Arbidol (OTCpharm)
3	Lopinavir+ Ritonavir	**26.8%**	**60,8%**	**34.0%**	Kaletra (AbbVie)	Kalidavir (Pharmasyntez)
4	Sevoflurane	**24.8%**	**54.5%**	**29.7%**	Sevorane (Abbott)	Sevoflurane (several manufacturers)
5	Pemetrexed	**69.0%**	**96.1%**	**27.1%**	Verotrexed (Veropharm)	Verotrexed (Veropharm)
6	Atorvastatin	**56.4%**	**81.4%**	**25.0%**	Atorvastatin (KRKA)	Atorvastatin (Ozon)
7	Adalimumab	**2.8%**	**25.3%**	**22.5%**	Humira (AbbVie)	Dalibra (Biocad)
8	Rituximab	**60.2%**	**81.8%**	**21.7%**	Acellbia (Biocad)	Acellbia (Biocad)
9	Cefoperazone+ sulbactam	**45.8%**	**65.8%**	**20.0%**	Sulzoncef (Sintez)	Bactsefort (Kraspharma)
10	Heparin sodium	**16.1%**	**33.0%**	**16.9%**	Heparin (Belmedpreparaty, Belarus)	Heparin (several manufacturers)

drugs (36.7% of the physical volumes of drugs 'priced below 50 roubles'). In packages, the shift in the structure towards the segments «RUB 150-500» (+5.9%) and «More than RUB 500» (+2.6%) was due the increased purchases of the flu vaccines Ultrix and Sovigripp.

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 RUB 50» (5.1%), «RUB 50-150» (6.1%) and «RUB 150-500» (20.1%) is insignificant; the highest rate of sales accounting for 67.9% was also in the segment «More than RUB 500».

In the segments where the price per unit 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 2.5 times.

The ratio of hospital purchases in Russia at the end of 2020, by ATC codes, 1st level, is shown in Table 16.

The rating of drugs in the HCI segment by ATC codes is much different from that on the commercial market. The TOP 2020 differs from the rating of the last year. The cause is the same – the increase in purchases of drugs related to the cancer program and of drugs recommended by the Ministry of Health for the prevention, diagnosis and treatment of COVID-19.

In the past 2 years, [L] Antineoplastic and Immunomodulating Agents are on top in the hospital purchases segment of 2020 (a

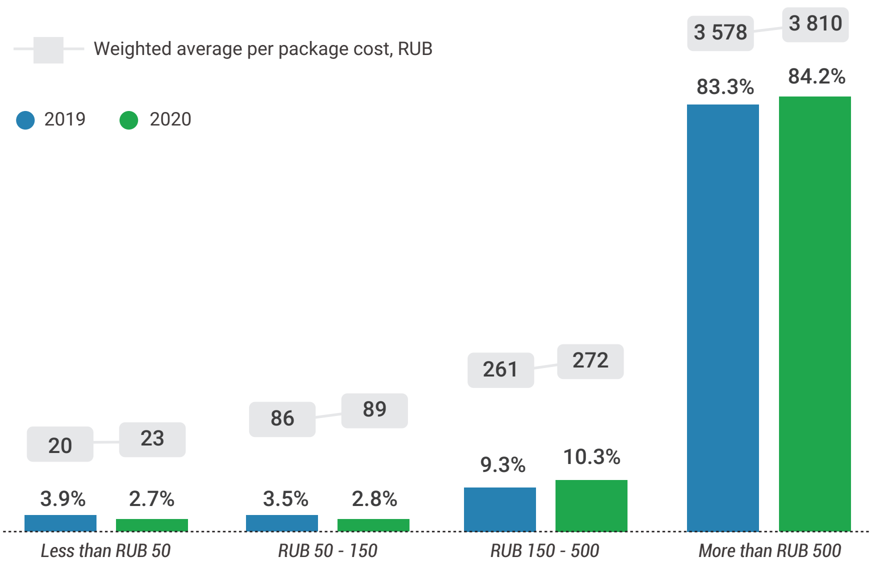


Figure 27

HCI segment structure, by price categories in value, 2019-2020

36.98% share by value), thus demonstrating a noticeable increase in purchases by 40.2% (purchases of drugs in this category grow every year since 2013). The increase in the volumes of sales in [L] was mainly on account of the increased purchases in the largest sub-code [L01] Antineoplastic Agents (+38.7% in roubles), namely, the original imported drugs – monoclonal antibodies: F.Hoffmann-La Roche's Tecentriq (+221.0%), Bristol-Myers Squibb's Opdivo (+101.1%) and Merck&Co's Keytruda (+99.6%), – that have no equivalents on the market. The maximum growth rates were demonstrated by immunosuppressants [L04] (+73.3% in roubles). Also in volume terms, antineoplastic and immunomodulating agents demonstrate a noticeable increase: +22.6%.

[J] Antiinfectives for systemic use rank second. In 2020, the volume of this group grew by 12.4%, which is, though, almost twice as little as the growth in hospital purchases in general. The increase was due to additional sales of antibacterials [J01] (+41.0%) and vaccines [J07] (+19.3%). In the antibacterials sub-group, purchases grew for INNs such as Cefepime+Sulbactam (+659.0%), Azithromycin (+234.9%) and Levofloxacin (+147.4%). Among vaccines, the most demanded brands were: the flu vaccines Ultrix (+655.5%) and Sovigripp (+56.8%), and the quadrivalent recombinant HPV vaccine Gardasil (+142.3%).

Group [B] Blood and Blood Forming Drugs (+34.1%) retains the third position by the volume of hospital purchases. The largest in 2020 became [B01] Antithrombotic Agents, which accounted for more than half the group's sales in roubles. The best sellers are drugs on the basis of INN Enoxaparin sodium (Enixum, Clexane). Antithrombotic agents reduce the risks of thromboembolic

Figure 28

HCI segment structure, by price categories for import and localized drugs in value, 2020

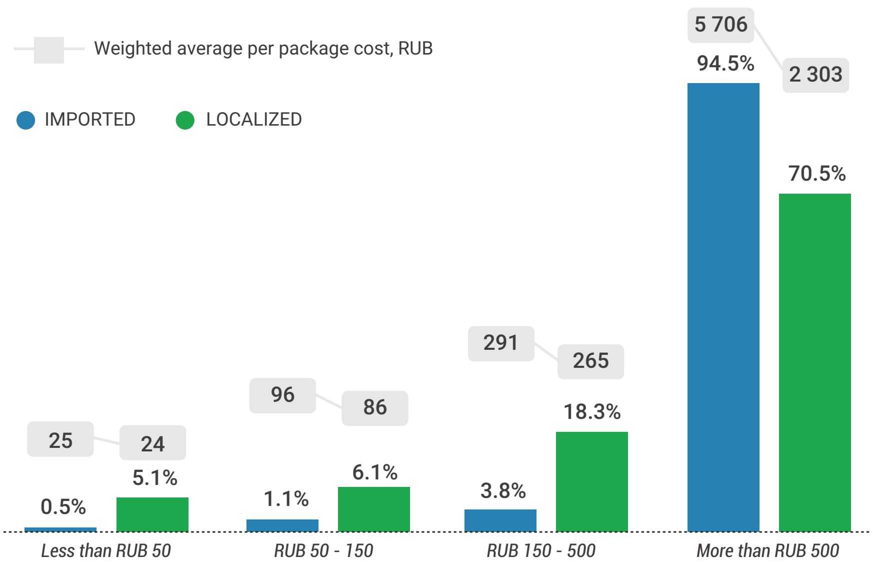


Table 16

Hospital purchases structure, by ATC code, 2020

ATC code 1st level	Value, bln roubles	Share in value terms, %	Volume, mln packages	Share in volume terms, %
Antineoplastic and immunomodulating agents [L]	**148.17**	**36.98%**	**18.70**	**2.22%**
Antiinfectives for systemic use [J]	**129.63**	**32.35%**	**296.18**	**35.19%**
Blood and blood forming organs [B]	**43.67**	**10.90%**	**262.27**	**31.16%**
Nervous system [N]	**15.84**	**3.95%**	**61.62**	**7.32%**
Various [V]	**12.34**	**3.08%**	**12.15**	**1.44%**
Alimentary tract and metabolism [A]	**11.30**	**2.82%**	**47.49**	**5.64%**
Musculoskeletal system [M]	**8.49**	**2.12%**	**15.24**	**1.81%**
Cardiovascular system [C]	**7.44**	**1.86%**	**43.63**	**5.18%**
Respiratory system [R]	**5.61**	**1.40%**	**17.91**	**2.13%**
Non-ATC	**4.57**	**1.14%**	**0.73**	**0.09%**
Sensory organs [S]	**4.50**	**1.12%**	**5.08**	**0.60%**
Systemic hormonal preparations, excluding sex hormones [H]	**3.55**	**0.89%**	**10.56**	**1.25%**
Dermatologicals [D]	**2.78**	**0.69%**	**46.49**	**5.52%**
Genitourinary system and sex hormones [G]	**2.32**	**0.58%**	**2.76**	**0.33%**
Antiparasitic products, insecticides and repellents [P]	**0.53**	**0.13%**	**0.92**	**0.11%**

complications, which are rather high in COVID-19 patients. 90.5% of volumes fall within [B05] Blood substitutes and perfusion solutions, with the leading INN Sodium chloride.

The maximum growth in purchases was observed in the group of Antiparasitic products, insecticides and repellents (+1,823.8% in roubles and +199.5% in packages) owing to increased expenditures of medical institutions on antimalarial drugs under INN Hydroxychloroquine (+15,180.8%), which were recommended for the prevention, diagnosis and treatment of the novel coronavirus infection.

The most urgent concern in today's medicine are cardiovascular diseases as heart and vascular diseases are the leading cause of death. In 2020, the purchases of drugs under this category increased by 56.3% in roubles, while in 2018-2019 we saw a drop in the purchases in this category. In consequence, over 2 years their volumes dropped two-fold and, despite the increase in purchases in 2020, the ratio in roubles turned out to be lower than in 2017.

Table 17 shows the rating of the top 20 manufacturers in the HCI segment at the end of 2020; it is different compared to the previous year, by manufacturers as well as by positions. The top 3 manufacturers are companies with a high proportion of drugs for the treatment of oncological diseases.

Owing to the increase in purchase volumes by 39.3%, Merck & Co moved up to rank 1st (+2 position lines). The company supplies 70 drug brands to hospitals. The highest growth in the hospital expenditures was for the HPV vaccine Gardasil (+142.3%) and the antiviral agent for chronic hepatitis C Zepatier (+130.8%). In 2020, medical institutions started purchasing two new antiretroviral drugs Piveltra and Delstrigo.

The year-end second is F.Hoffmann-La Roche (+82.1%), one of those that demonstrated the most significant growth in the top 20. The company's hospital portfolio includes 40 brands. 12 of F.Hoffmann-La Roche's basic drugs belong to [L] code and account for 97.5% of the corporation's purchases.

Public funds spent in 2020 on purchases of Russian Biocad's drugs totalled 23.5 billion roubles, which is by 19.3% more than a year earlier. The major contribution to the growth was from the antineoplastic agents Acellbia (+88.9%) and Carboplatin (+72.3%). All in all, HCI purchased 37 brands that substitute for foreign-made equivalents under the import substitution program. The company's portfolio covered 5 more brands against 2019.

There are 5 domestic manufacturers in the top 20. All Russian companies demonstrated positive dynamics. Among the best performing companies are Fort (+654.8% in roubles and +41 positions in the rating) and Sintez (+42.1% and +7 positions).

Fort supplies vaccines to hospitals; in 2020, HCI purchased the inactivated flu vaccine Ultrix for around 6.6 billion roubles (+655.5% against 2019).

Among the major drugs of Sintez, a noticeable increase in the purchase volumes was observed in Clopidogrel (+1,245.9%) used to prevent atherothrombotic and thromboembolic complications; the synthetic antibacterial broad-spectrum fluroquinolone Leflobakt under INN Levofloxacin (+180.9%); the antimalarial agent Hydroxychloroquine (new).

Purchase volumes declined as compared with 2019 only with the two manufacturers from the rating – AbbVie (-36.5%; – 6 position lines) and Abbott (-17.3%; – 3 position lines).

Table 18 shows the top 20 brands in the HCI segment at the end of 2020. The top 20 brands account for

Table17

Top 20 manufacturers in the HCI segment by value, 2020

Ranking	Change	Manufacturer	Value, mln roubles	Share, %	Growth, % 2020/2019
1	+2	Merck	**26,917**	**6.7%**	**+39.3%**
2	+3	F.Hoffmann-La Roche	**24,980**	**6.2%**	**+82.1%**
3	-2	Biocad	**23,541**	**5.9%**	**+19.3%**
4	-2	Sanofi	**22,455**	**5.6%**	**+15.6%**
5	-1	Pharmasyntez	**16,334**	**4.1%**	**+14.0%**
6	+5	Bristol-Myers Squibb	**15,903**	**4.0%**	**+96.8%**
7	-1	Pfizer	**13,613**	**3.4%**	**+2.4%**
8	+1	Microgen	**13,017**	**3.2%**	**+25.2%**
9	+5	AstraZeneca	**11,539**	**2.9%**	**+54.7%**
10	-3	GlaxoSmithKline	**11,533**	**2.9%**	**+2.6%**
11	+4	Bayer	**10,004**	**2.5%**	**+34.3%**
12	-1	Johnson & Johnson	**9,738**	**2.4%**	**+3.4%**
13	-3	Abbott	**7,956**	**2.0%**	**-17.3%**
14	-1	Novartis	**7,644**	**1.9%**	**+1.6%**
15	-7	AbbVie	**6,792**	**1.7%**	**-36.5%**
16	+41	Fort	**6,593**	**1.6%**	**+654.8%**
17	+2	Fresenius	**5,065**	**1.3%**	**+25.1%**
18	+2	Astellas	**4,813**	**1.2%**	**+19.1%**
19	+2	Boehringer Ingelheim	**4,613**	**1.2%**	**+28.0%**
20	+7	Sintez	**4,433**	**1.1%**	**+42.1%**

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

33.0% of hospital purchases, which is 2% higher than in the previous year.

There are significant changes in the rating: in 2020, only the key drug from the top 20 retained its position of 2019. Sanofi's French vaccine Pentaxima against diphtheria, tetanus, pertussis, poliomyelitis and haemophilus influenzae type b (+14.7%), purchased according to the National Vaccine Schedule, ranks first.

Second comes Bristol-Myers Squibb's infusion solution concentrate Opdivo (+101.1%) used in the treatment of malignant tumors.

Over the year, the antineoplastic agent Keytruda made by Merck & Co moved 3 positions up to rank third among the brands, owing to the increase in the purchase volumes by 99.6%.

Besides expensive imported drugs, the top 20 include also Russian cheap rehydrating agent Sodium Chloride (+5.4%). In packages, Sodium Chloride is the all-time leader accounting for ¼ of all purchases in the hospital segment. 40 manufacturers sell on the market drugs under this brand. For two years in a row, Grotex that replaced the former leader Escom is now the leader.

Table 18

Top 20 brands in the HCI segment by value, 2020

Ranking	Change	Brand	Value, mln roubles	Share, %	Growth, % 2020/2019
1	-	Pentaxim	14,352	3.6%	+14.7%
2	+2	Opdivo	13,418	3.3%	+101.1%
3	+3	Keytruda	12,635	3.2%	+99.6%
4	-1	Sovigripp	10,572	2.6%	+56.8%
5	+2	Avegra	9,229	2.3%	+48.8%
6	+6	Perjeta	6,967	1.7%	+54.5%
7	+66	Ultrix	6,593	1.6%	+655.5%
8	-3	Herticad	6,323	1.6%	-2.2%
9	-7	Prevenar	6,076	1.5%	-18.3%
10	-1	Sodium Chloride	6,044	1.5%	+5.4%
11	+4	Kadcyla	5,697	1.4%	+79.2%
12	-2	Tivicay	5,665	1.4%	+13.2%
13	-2	Isentress	4,598	1.1%	-4.5%
14	+27	Tecentriq	4,190	1.0%	+221.0%
15	+1	Eviplera	3,782	0.9%	+31.5%
16	new	Spinraza	3,497	0.9%	new
17	+202	Brilinta	3,443	0.9%	+1 094.2%
18	+15	Xtandi	3,397	0.8%	+105.7%
19	+1	Erbitux	3,101	0.8%	+40.4%
20	+2	Kalidavir	2, 853	0.7%	+32.2%

Note:
sales volumes are in ultimate prices including VAT.

5. Dietary Supplements

To eat is a necessity, but to eat intelligently is an art.
Francois VI de La Rochefoucauld

2020 recalibrated all segments of the market, including the segment of sales of dietary supplements. To stay up to date, in 2020 manufacturers of dietary supplements had to promptly respond to the market challenges – by restructuring and re-arranging their manufacturing capacities to produce food supplements that would be adequate and relevant at the time of the COVID-19 pandemic. In the first place, it concerns substances strengthening resistance of the body to infections: Vitamins D3 and C, zinc, elder, echinacea, and so on.

In 2020, sales of supplements boosting the immune system grew over the year by 124.4%. Compared with the figure for 2016, the group grew in size more than four-fold. The top three in this category are Supradyn (+468.5% against 2019), Evalar (+1,048.8%) and Solgar (+118.3%). Volumes of sales of supplements for a healthy immune system are growing also owing to new products that appear on the market every year.

In the second half of the year, much demand was observed for food supplements with Vitamin D. This dynamics was promoted also by research data: according to research by the Almazov National Medical Research Centre of the Ministry of Health of Russia, 71.3% of people with the detected COVID-19 suffered from Vitamin D deficiency, and 36.3% had severe deficiency. There were also contrary opinions that the deficiency in Vitamin D could provoke severe conditions of the disease caused by the coronavirus.

In consequence, sales of Vitamin D grew more than three-fold in money terms. The demand for Vitamin D especially grew in the 4th quarter when monthly sales of the group's supplements exceeded 500 million roubles. If compared with the third quarter, sales volumes grew by 202.0%, and if compared with the fourth quarter of the previous year – by 342.9%. Among the leading brands in 2020 were Detrimax (a 45.6 share in the group in roubles), Solgar (17.4%) and Evalar (5.3%). Over the year, about 60 new SKUs emerged on the market in various forms such as widespread pills, oral drops, effervescent tablets, chews, myceliated aqueous solutions, and sprays. Among the most demanded novelties were Detrimax 2000 Tablets 240 mg No. 60 (sales volumes in 2020 worth 282.0 million roubles), Evalar Vitamin D Oral Solution [oil] 500 ME 10 ml No. 1 (107.4 million roubles), INS Vitamin D3 Oral Drops 20 ml No. 1 (95.6 million roubles).

Vitamin C supplements are also intended to boost the immune system. Ascorbic acid increases resistance of the body to infections and viruses and is used as prophylaxis. This explains the growing demand for DS with Vitamin C. During 12 months of 2020, dietary supplements in this category demonstrated high growth rates – by 102.2%. In packages, this figure is notably lower (+6.7% against 2019), which speaks of two things: that pharmacy customers opted for more expensive items, and that the prices significantly rose (the weighted average retail price grew by 5.6% to 190 roubles/package). The top 3 brands in 2020 were: Evalar (a 22.8% share in the group in roubles), Ascorbic Acid (12.8%) offered by 20 manufacturers, and Solgar (11.9%). The higher demand for Vitamin C also contributed to the emergence of new products on the market: in 2020, manufacturers of dietary supplements offered more than 30 new SKUs. The most popular novelty are chews with Vitamin C and sugar «Actifruit Vitamin C+Glucose Chews 2.5 g No. 10» (sale volumes in 2020 worth 32.8 million roubles).

Also in 2020, pharmacies sold 2.8 million packages of DS containing combinations of Vitamins D and C, worth 830.5 million roubles. The growth against 2019 was 28.4% in roubles and 19.7% in packages. Among the leaders in this group are VTF's supplements – Vitamin Mineral Complex and Fortevit, and Queisser Pharma's Doppelherz.

A unique market position is held by supplements that help to maintain and re-establish the balance of the intestinal microflora. Over the last 5 years, this DS category has been gaining popularity each year. In 2020, the leading brands stood high in the rating of dietary supplements: Maxilac (7th; +29.9%); Bac-Set (9th; +26.2%), Lactobalance (25th; +122.0%). Taking drugs, especially, antibiotics, may affect the gastrointestinal flora. That is why these dietary supplements are needed in the current epidemiological situation.

The supplements to lose weight and to aid fertility, which were in demand earlier, went negative in 2020. Over the year, their sales dropped by 6.7%.

So, the shift in the consumer demand towards vitamins and vitamin complexes is one of the main effects of the pandemic on the DS market.

It is of note that in 2020 legislative initiatives were pressuring the regulation over sales of dietary supplements.

For example, SanPiN (Sanitary Rules and Regulations) 2.3.2.1290-03 (approved in 2003) that prohibited distance sales of DS was cancelled as of January 1, 2021. At the end of 2020, the Ministry of Industry and Trade finalized the draft order of the Russian Government concerning retailing, which allows online sales of DS only to pharmacies. This is sure to have its effect on the market and the major players that own online sites in this segment. Earlier, the draft envisaged absolute prohibition of online sales of dietary supplements. Restrictions are imposed with the aim to avoid the risk of increase in the volumes of fake items.

How will the famous American iHerb site work under such restrictions is highly questionable. The company started having problems already in 2020. In spring, Roskomnadzor (the Federal Service for Supervision of Communications, Information Technology, and Mass Media) blocked IP addresses of the online retailer's mobile application on two claims filed by the General Prosecutor's Office. By court order, the iHerb marketplace was compelled to remove information about 10 product items with prohibited data and the iHerb application from Google Play and App Store for Russian users. Furthermore, the online retailer had to audit its product line for the compliance with the technical regulation of the Customs Union and removed about 1,000 product items from the Website. The retailer failed to comply with the second court order as it did not specify an exact list of products, information about which had to be removed.

At the beginning of 2021, the Supreme Court upheld the blocking of the iHerb application as lawful. That decision appears to be questionable and artificially restricts competition on the market for food supplements, which will primarily affect consumers seeking to minimize their spending on vitamins and other supplements. Other measures if such are taken to restrict access of major players to the online market will significantly raise the prices.

Rospotrebnadzor (the Russian Agency for Health and Consumer Rights), with its particular focus on monitoring the quality and safety of DS, proposed to the Ministry of Industry and Trade that food supplements should be labelled with identification means. It presented its proposal at the meeting of the state committee for counteracting illegal industrial trade, chaired by the ministry of industry and trade. The DS labelling initiative is proposed to be run in a trial mode from the 1st quarter of 2021.

The number of DS manufacturers is comparable to the number of drug manufacturers (about 1,000). But there are only about 220 manufacturers that produce both drugs and DS. This means that most manufacturers will have to get ready for labelling from scratch. As a result, prices for DS can go up significantly as the volumes of DS sales are lower and cannot compensate the labelling costs. In addition, many manufacturers will stop producing DS (mainly, those with low turnovers) as it will be no longer profitable for them to restructure their manufacturing capacities in line with the labelling requirements.

At the end of 2020, the commercial market for dietary supplements was worth 74.1 billion roubles (+17.1% against 2019), or 321.8 million packages (-1.2%). There was a visible upsurge in sales in the 1st quarter but the pandemic of the coronavirus infection changed the consumption structure and the increases in sales were only occasional; on the whole, from April sales started declining. In packages, the market shrank against the previous year. So, as was expected earlier, a sudden surge in demand changed to a continuing decline in sales. The peak was registered in March: the growth rates were +51.8% in value terms and +29.0% in volume, as compared with the third month of 2019.

On average, in 2020 one package of DS cost 230 roubles (retail price), which is 18.5% more than in the previous year. The DS weighted average price in pharmacies' wholesale prices amounts to roughly 174 roubles.

To keep up competitive prices and to attract customers, pharmacies continued decreasing the markup for this product group: in 2020, the DS markup was 32.1%, against 2019 it went down by 2.8%, and, if compared with 2016, it shrank even more – by 8.2%.

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 high-price segment (+30.1% in roubles, +31.1% in packages). As a result, the DS market structure in terms of the price categories has changed giving predominance to supplements costing more than 500 roubles, the share of this supplement group grew by

5.2% in value and by 3.3% in kind. Therefore, expensive dietary supplements accounted for over 50% of profit gained by pharmacies (52.2% in roubles). The first 5 places in the sales volume ranking are taken by multivitamins. Demand is not conditioned on prices. Thus, it is clear that the consumer's profile is changing and DS market grows thanks to well-off people leading healthy lifestyle that implies expensive vitamins intake.

Second in size on the market in value terms come supplements from «RUB 300-500» (22.0%).

Cheap supplements are still the most highly demanded by Russian customers, despite the sales volume drop by 6.9% in roubles and by 11.4% in packages. In consequence, items of «below RUB 50» are being gradually pushed off from shelves: in 2020, their share dropped by 4.4% to 38.3% of sold supplements in packages. Due to low value in roubles, the lower segment volume does not exceed 4% (-1.0% in comparison with 2019). Hematogen and Ascorbic acid hold half of the sales volume in packages of the «below 50 roubles» segment.

DS price dynamics was analyzed using Laspeyres price index. One of the reasons for the rise in the weighted average prices was the DS inflation rate, which had once again grown significantly. In 2020, DS prices in roubles grew by 8.7%.

DS are marketed by manufacturers as nutritional supplements aimed at prevention of various diseases. The DS classifier (developed by DSM) in terms of effect contains 17 chapters, most of which have the 2nd sublevel, and some – the 3rd.

Over the year, the rating somewhat changed. Seasonal groups [R] DS for treatment of respiratory organs conditions (+27.2%) and [I] DS supporting the immune system function (+124.4%) considerably strengthened their rating positions by moving 3 position lines up owing to increased sales.

Multipurpose supplements of group [V] «DS affecting the whole body» (34.1% share in roubles) are traditionally the most in-demand on the market. Compared to 2019 sales volume of this DS group grew by 29.2%. The principal

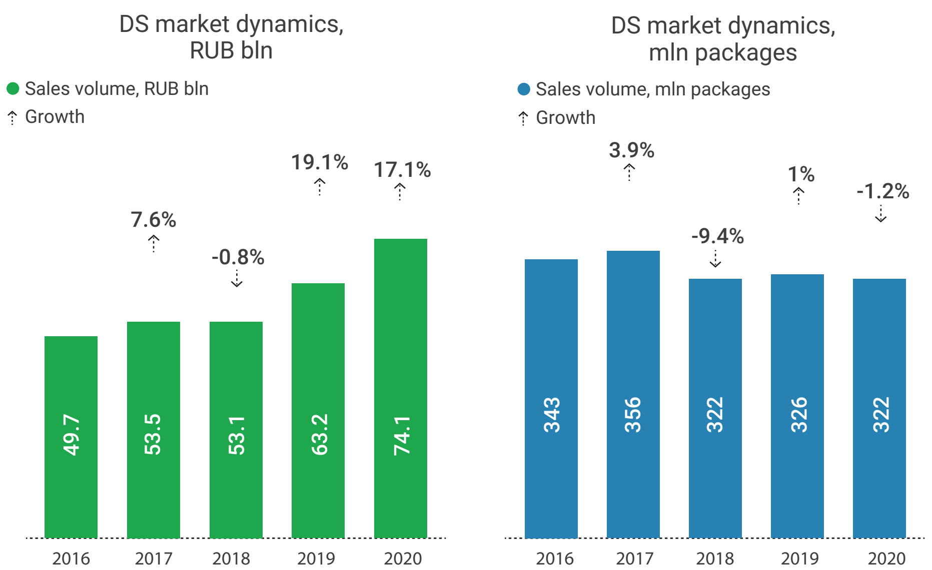


Figure 29

Dynamics of DS Pharmacy Sales in Russia

DS brands in group [V] are: Solgar (share in the group sales – 14.9% in roubles), Solgar Vitamin and Herb and Femibion (6.6%) manufactured by Dr. Reddy's.

The second place is taken by group [A], DS affecting the digestive system (18.9%), which experienced sales growth by 10.6%. The most popular products in this group are Fitolax (group sales share of 13.9%), by Evalar, a domestic manufacturer, and Maxilac (11.5%) by Alium.

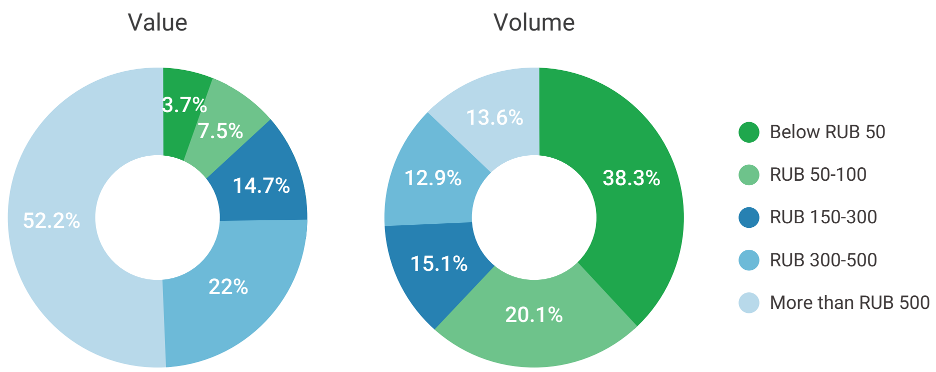
The third position is held by [N] DS affecting the central nervous system function (9.2%), also with positive sales dynamics: +5.3%. The group is headed by Russian Evalar's supplements – The Calming Formula (a 13.3% share in the group's sales in roubles) and Evalar Glycine (13.0%).

10 groups demonstrated positive dynamics. The maximum growth rates were observed in:

- DS supporting the immune system function (+124.4%): the positive dynamics in [I] was owing to Evalar (+1,048.8%) and Natrol (+1,020.1%);
- DS used for treatment of skeletal system conditions (+75.4%): many supplements in [M] contain Vitamin D3, which has widely taken on worldwide lately; Vitamin D3 promotes the immune system and reduces the risk of colds; sales of Evalar and Detrimax supplements from group [M] grew by 2,184.5% and 477.8%, respectively;

Fugure 30

DS Sales Structure by Price Segments in 2020



Fugure 31

Change in DS prices on the Russian pharmacy market

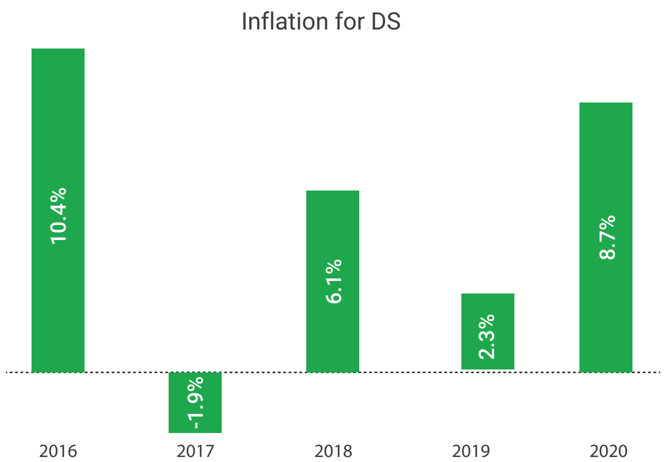


Table 19

Sales rating according to the DS classifier chapters

Ranking	Change	Group	Value, mln roubles	Share, %	Growth, % 2020/2019
1	-	DS affecting the whole body [V]	**25,242.0**	**34.1%**	**+29.2%**
2	-	DS affecting the digestive system [A]	**14,010.6**	**18.9%**	**+10.6%**
3	-	DS affecting the central nervous system function [N]	**6,779.2**	**9.2%**	**+5.3%**
4	-	DS affecting the reproductive system [G]	**5,940.3**	**8.0%**	**-6.7%**
5	-	DS used for treatment of skeletal system conditions [M]	**5,373.7**	**7.3%**	**+75.4%**
6	-	DS supporting cardiovascular system functions [C]	**3,373.8**	**4.6%**	**+17.0%**
7	+3	DS for treatment of respiratory organs conditions [R]	**2,208.7**	**3.0%**	**+27.2%**
8	-	DS for treatment of various skin and hair conditions [D]	**2,177.6**	**2.9%**	**+6.6%**
9	-2	Slimming and cleansing DS [W]	**2,095.7**	**2.8%**	**-6.9%**
10	-1	DS affecting sensory organs [S]	**1,533.5**	**2.1%**	**-13.3%**
11	-	DS affecting hematopoietic system [B]	**1,451.8**	**2.0%**	**-0.9%**
12	+3	DS supporting the immune system function [I]	**1,412.1**	**1.9%**	**+124.4%**
13	-	DS used in case of poisoning and intoxication [T]	**898.6**	**1.2%**	**+16.1%**
14	-2	DS affecting the urinary system [U]	**714.2**	**1.0%**	**-8.1%**
15	-1	DS affecting the endocrine glands function [H]	**621.3**	**0.8%**	**-2.9%**
16	-	DS used to treat conditions caused by bacteria, viruses and fungi [J]	**165.2**	**0.2%**	**+47.7%**
17	-	DS used for treatment and prevention of oncology conditions (except reproductive system tumors) [O]	**75.4**	**0.1%**	**-16.1%**

- DS used to treat conditions caused by bacteria, viruses and fungi (+47.7%) rank third by the annual growth rates: Forcis fast dissolving tablets (+18,033.8%) recommended for prophylaxis of high risks of colds, and Candi-Trim caps (+3,826.3%) against fungal diseases of various locations contributed most of all to the positive dynamics of the group.

So, among the best sellers were supplements positioned by the manufacturers as immune-boosting and as prophylaxis of colds.

The most significant drop in sales was demonstrated by the group [O] "DS used for treatment and prevention of oncology conditions (except reproductive system tumors) – by 16.1%. In 2020, sales of the antioxidant Biodihydroquercetin and the supplement Repein used to ease side effects of X-ray and chemotherapy dropped by 47.0% and 40%, respectively.

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

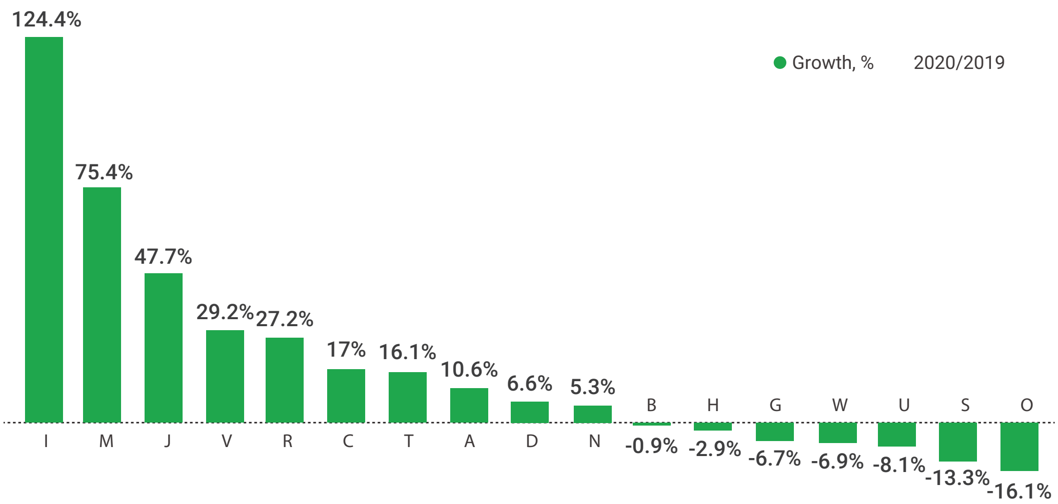
At the end of 2020, pharmacies offered 2,783 DS brands (around 9,106 SKUs) from 1,018 manufacturers. 232 new brands appeared on the market during the year. Earlier, it was easy for novelties to get to the top in ratings thanks to adequate promotion; now, it is hard to launch «attractive» products. In 2020, DS manufacturers focused mainly on positioning their products as helping to prevent viral infections.

The most successful among «novelties» was Magnesium+B6 Forte (from Shandong Yibao Biologics), which ranked 56th at the end of the year (sales volumes worth 239.0 million roubles).

In the TOP-20 rating of brands leading in sales volumes in value terms, a number of significant changes happened. The top three remained

Fugure 32

DS sales dynamics by classifier chapters, roubles



the same. First comes Solgar's line of food additives (a 8.1% share in roubles), affecting the whole body and its individual systems. The second place is taken by Doppelherz, vitamin and mineral supplements (2.8%). The last of the three leaders is Fitolax (2.6%), a DS with laxative effect.

There are two new brands in the rating. Unipharm's Detrimax used to compensate for the deficiency in and maintain the balance of Vitamin D increased its sales by 477.8% and moved 34 position lines up to rank 6th. In the end, the brand demonstrated the highest positive dynamics among the top twenty. Sales of another novelty – Stada's chondroprotective agent Artra (+6 position lines) grew by 76.4%.

Among positive trends is also the dynamics in sales of Evalar's products (+176.9%; +16 position lines) that cover a wide range: much was contributed to the growth by the supplements with Vitamins C and D, zinc – Evalar Vitamin C (+1,857.8%), Evalar Vitamin D3 (new) and Evalar Zinc+Vitamin C (+1,039.5%).

Hematogen offered by 12 companies showed negative dynamics: – 19.8%.

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.

Evalar has kept the strongest representation in the brands' rating – it holds 7 positions out of 20, their share equals 11.2% (+0.3% compared to 2019).

The DS market is dominated by products manufactured in Russia. Domestic DS hold 79.1% in kind. Over the year, the market structure by origin shifted towards imported food supplements: their share grew by 4.3% to 51.4% in roubles, and by 3.0% to 20.9% in packages.

Sales of foreign manufacturers of food supplements increased by 27.8% in roubles and by 15.2% in packages. Russian companies also demonstrated positive dynamics in value terms (+7.6%), though in packages sales volumes dropped by 4.8%.

In 2020 an average domestic DS price per package equalled 142 roubles (+13.0% compared to 2019), which is approximately 4 times lower than an imported product price per package – 565 roubles (+10.9%).

The leaders among foreign DS manufacturers are USA (36.3%), Germany (22.5%) and India (5.6%). The most popular American DS are Solgar Vitamin and Herb (Solgar product line) products. Leaders among German manufacturers are Stada (Vitrum and Artra brands) and Queisser Pharma (Doppelherz DS line). Leaders among Indian manufacturers are Dr.Reddy's (Femibion) and Sun Pharmaceutical (Neotravisil).

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

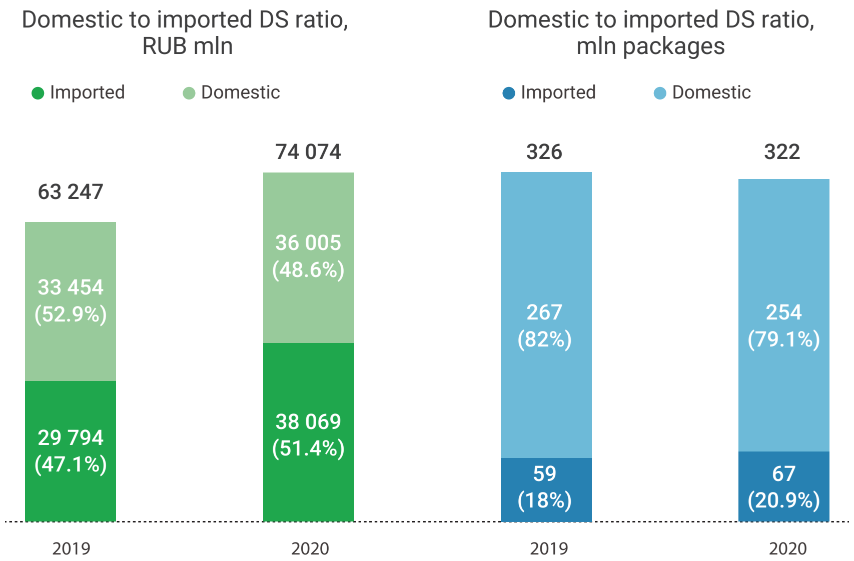
DS manufacturers' concentration on the pharmacy market is quite high – TOP-20 of companies hold 63.0% of the market.

For many years, Evalar, a Russian company, has remained the market leader (16.1% share in roubles). In 2020 it witnessed a sales volume increase by 10.1%. The growth in the manufacturer's sales was thanks to the

Table 20

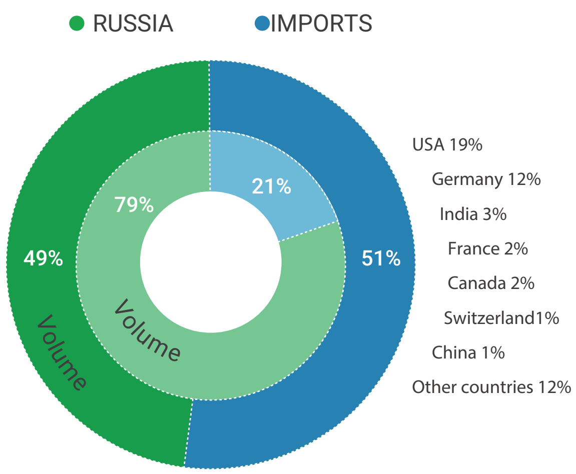
TOP-20 DS brands in Russia in 2020

Ranking	Change	Brand	Value, mln roubles	Share, %	Growth, % 2020/2019
1	-	Solgar	6,014.5	8.1%	+52.8%
2	-	Doppelherz	2,069.6	2.8%	+7.1%
3	-	Fitolax	1,944.4	2.6%	+4.1%
4	+16	Evalar	1,679.4	2.3%	+176.9%
5	-1	Femibion	1,678.1	2.3%	+15.4%
6	+34	Detrimax	1,632.2	2.2%	+477.8%
7	-1	Maxilac	1,616.5	2.2%	+29.9%
8	-3	Vitrum	1,513.7	2.0%	+13.7%
9	-2	Bac-Set	1,513.5	2.0%	+26.3%
10	+6	Anti-Age	1,103.2	1.5%	+60.4%
11	-3	Turboslim	1,056.1	1.4%	-5.9%
12	-1	Natures Bounty	1,016.0	1.4%	+9.0%
13	-	Supradyn	994.7	1.3%	+10.7%
14	+1	Vitamishki	938.7	1.3%	+15.8%
15	-3	Formula Spokoistviya	900.3	1.2%	-3.0%
16	-6	Complivit	898.7	1.2%	-6.6%
17	-8	Evalar Glycine	881.6	1.2%	-11.2%
18	-1	Ovesol	734.9	1.0%	+7.4%
19	-5	Hematogen	694.6	0.9%	-19.8%
20	+6	Artra	676.7	0.9%	+76.4%



Fugure 34

Structure of domestic and imported DS sales volumes



Fugure 35

Structure of domestic and imported DS sales volumes. by countries in 2020

Evalar supplement (+176.9%) that covers a wide range of products; the Anti-Age DS line (+60.4%) for rejuvenation inside out; Evalar Bio herbal teas (+15.7%). On the contrary, sales of the vitamins for eye health Evalar Blueberry Forte and the dietary supplements Evalar Glycine for enhancing mental capacity and improving sleep dropped by 23.4% and 11.2%, respectively. At the present moment Evalar portfolio features 332 various DS trade names, divided into 79 product lines under one brand. Each year, the company launches new products on the market. In 2020, Evalar re-arranged its manufacturing capacities to produce dietary supplements for boosting the immune system and as 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 60 new DS in terms of dosage, administration and form. The best-selling novelty is Vitamin D3 in the form of the oily solution Evalar Vitamin D3 Oral Solution [oil] 500 ME 10 ml No. 1. In 2020, its sales were worth 107.4 million roubles. In addition to food supplements, the company added its product portfolio with Orvis hand sanitizer, by re-equipping its cosmetics production line to meet the needs of the market and consumers. A major milestone was the opening of the second synthetic drugs line at the production facilities in the Altai Krai. Let us recall that a year earlier the company had launched the production of plant preparations. Evalar aims at expanding its own drugs portfolio as well as contract manufacturing on its site.

American Solgar Vitamin and Herb (8.1%) ranks second, having increased its sales by 52.8%. 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 ten major products have increased. The highest growth was observed in products recommended by the manufacturer as an additional source of zinc – Solgar Zinc Picolinate (+335.8%) and of Vitamin C and flavonoids – Solgar Ester-C plus Vitamin C (+315.5%).

PharmaMed (5.0%) with its major supplement Bac-Set (a 40.5% share in the manufacturer's sales) went up to rank third, having increased its sales volumes by 16.0% in roubles. The company's portfolio comprises 9 brands. Most of all, the growth in sales was boosted by the increased demand for the company's key supplements: the multiprobiotic for adults and kids Bac-Set (+26.3%) that helps to maintain and re-establish the balance of the intestinal microflora; the biocomplex Fitomucil (+23.0%) for management of constipations, restoration of the bowel function and relief of hemorrhoid symptoms; vitamins for kids Vitamishki (+15.8%) in the form of tasty gummy bears on the basis of natural juices. The supplement SpermActin Forte (-24.9%) to increase fertility in men became less popular than a year earlier. One of the causes was the general decline in interest towards this category in 2020.

High growth rates were demonstrated by Unipharm (+292.6%; +14 position lines). Most of the profits gained by the American manufacturer came from the supplement Detrimax (a 68.7% share in the brand's sales; +477.8% against 2019), which is recommended as an additional source of Vitamin D for strong bones and teeth, immunity system, to relieve fatigue and increase the tone of the body, to maintain the muscle strength, for assimilation of information, concentration of attention and development of memory, maintenance of reproductive function, compensation of deficiency in and maintenance of the

Table 21

TOP-20 DS manufacturers in Russia in 2020

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

Ranking	Change	Manufacturer	Value, mln roubles	Share, %	Growth, % 2020/2019
1	-	Evalar	**11,929.7**	**16.1%**	**10.1%**
2	-	Solgar Vitamin and Herb	**6,014.5**	**8.1%**	**52.8%**
3	+1	PharmaMed	**3,735.4**	**5.0%**	**16.0%**
4	-1	Stada	**3,628.7**	**4.9%**	**2.0%**
5	+14	Unipharm	**2,377.4**	**3.2%**	**292.6%**
6	-	Queisser Pharma	**2,072.8**	**2.8%**	**6.7%**
7	-2	OTCpharm	**2,064.1**	**2.8%**	**-7.2%**
8	-1	Dr. Reddy's	**1,869.2**	**2.5%**	**14.8%**
9	+1	Alium	**1,624.1**	**2.2%**	**30.5%**
10	-1	Vneshtorg Pharma	**1,606.9**	**2.2%**	**19.2%**
11	-3	Bausch Health	**1,492.5**	**2.0%**	**-7.8%**
12	-1	Bayer	**1,422.0**	**1.9%**	**18.5%**
13	-1	Kvadrat-C	**1,214.9**	**1.6%**	**8.7%**
14	+7	Laboratoires Ineldea	**1,067.2**	**1.4%**	**99.0%**
15	-2	Natures Bounty	**1,016.0**	**1.4%**	**9.0%**
16	-1	Recordati	**832.7**	**1.1%**	**-1.7%**
17	-3	Polpharma	**730.9**	**1.0%**	**-16.7%**
18	-1	Diod	**699.9**	**0.9%**	**-8.5%**
19	-1	Biokor	**679.9**	**0.9%**	**3.3%**
20	-4	Pharm-Pro	**622.3**	**0.8%**	**-21.6%**

balance of Vitamin D. The maximum growth was observed in the neurotropic complex Neurouridin (+525.0%) that aids regeneration of nerve fibres, improvement of nerve conduction, strengthening of the nervous system and the general condition of the body.

Second by the growth rates was Laboratoires Ineldea (+99.0%; +7 position lines). The manufacturer has a narrow product line, only 8 brands; the brand that contributed to the growth most of all was Nutri Expert (+823.0%), supplements for weight loss and control, viability and immunity enhancement, health, well-being and comfort, sleep and nervous balance, joints and mobility, sex and beauty, and Pediakid special nutrition line for kids (+121.1%).

A key development area of Pharm-Pro (-21.6%) is making hematogen by the classical technology. The negative dynamics in sales was due to the decline in sales of Turbohematogen (-43.4%) and Hawthorn (-42.5%).

6. Cosmetics

It is better to be sure of a good result than to hope for an excellent one.
Warren Buffett

To study the performance of any market in 2020, one should analyze first the impact of the key factor – the pandemic of the coronavirus infection. The segment of pharmacy cosmetics sales is not an exception. In fact, it is a product segment that was affected most of all. A decrease in volumes in value terms is generally observed only in crisis periods. A good illustration of that is what happened in 2008-2009. Amid the financial and economic recession in the country, sales in this category stopped growing; in 2010, they even dropped by 3% in money terms compared with 2009. So, the dynamics of cosmetics sales can be referred to as an indicator of the economic performance and consumer purchasing power.

In 2020, cosmetics sales in pharmacies declined almost by 7% in money terms. This is one of the most substantial drops in the volumes for the key non-drug groups. Lower was only the demand for feminine hygiene products (due to a shift to other channels and online orders) and accessory products for rehabilitation such as elastic bandages, compression garments and the like (drops in this category were, among other things, due to the restrictions imposed in connection with COVID-19, in the first place,

Key product dynamics, 2020/2019

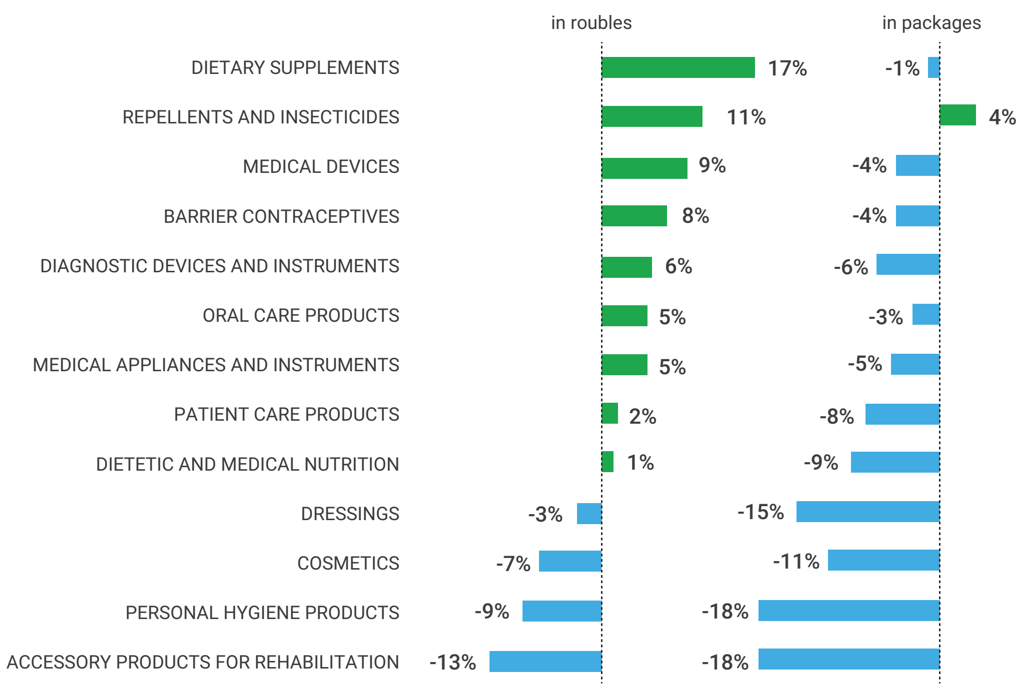


Figure 36

Dynamics of sales of the main non-drug product groups in pharmacies the prohibition of movements in April-May 2020, and then, the period of mandatory remote work for many employees, which lasted till December and was back in force at the beginning of 2021).

It is evident that the pandemic of the coronavirus infection has affected sales of cosmetics. Not only the consumption volumes reduced, but also the demand structure in the segment changed. Cosmetics are not only face or hair care products, but also cleansers that account 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. Antibacterial products for hand care purchased by pharmacy customers in 2020 were by 6 million packages more than a year earlier. In the end, the sales volumes in this group grew in money terms by 310.8% to 1.2 billion roubles.

In a short time many manufacturers commercialized the production of hand sanitizers. For example, even before the pandemic Evalar had re-arranged its production facilities in Biysk to produce antiseptic products in three forms: antiseptic sprays, sanitizer gels and Orvis solutions. The company's manufacturing capacities allow releasing up to 500 thousand packages of antiseptics a month (up to 1.2 million packages a month at full capacity).

The largest manufacturer of sanitizers Bentus Laboratories (Sanitelle) rose the demand on the domestic market three-fold. At the peak, the company's production facilities were running at full capacity and exports were noticeably limited.

There were very few cosmetics categories that demonstrated positive dynamics. It concerns, in the first place, seasonal product groups that are in special demand during periods of cold-related diseases. For example: «mouth and throat disorders» (+1,179.6%), «nose and sinus disorders» (+18.1%), «cold-related diseases» (+10.5%).

Most of the product groups saw a decline. Most of the sales volumes dropped in product groups such as hair removers (-37.4%), sunscreeners (-33.7%) and aftersun care products (-31.8%), pediculosis (-29.5%) and herpes (-25.5%) cosmetics, slim and skin tone anti-cellulite products (-22.5%), makeup products (-20.8%), products to stop excessive sweating (-14.9%), and so on.

Therefore, despite the general decrease in cosmetics sales, every year pharmacies expand the range of cosmetic products offered by them, this expansion is achieved by both adoption of new brands and broadening of the existing product lines. In 2020, Russian pharmacies sold around 2,000 various cosmetics brands (19,920 SKUs). Furthermore, manufacturers offered 151 new brands to the customer. Of course, the best sellers among them were antiseptics and sanitizers made by Russian manufacturers: the antibacterial hand gel Cleanelle (Triumph Trade), ranking 75th; the skin lotion Antiseptic Effect (Alkor/Malavit), ranking 104th. The above mentioned brands were included into the TOP-150 according to the sales volumes in value terms, since their sales in the analyzed year exceeded 207 million roubles.

According to 2020 results, cosmetics sales share is the third-largest (after medications and dietary supplements) in the pharmacy sales structure. Over the last 4 years, the dynamics in roubles remained low and volumes in packages kept falling. The 2014-2015 crisis had its effect, too. In addition, the market saw a flaming competition over customers as some of them switched over to other sales channels, especially to the online segment. Cosmetics manufacturers are also developing online sites for their own brands. With all its problems, 2020 did not contribute to the growth of this segment. Compared to 2019, the sales dropped by 6.7% in value terms and by 11.4% in kind. The volume of cosmetics sales via pharmacies amounted to 163.3 million packages or 42.8 billion roubles a year.

It is possible that customers opted for other channels because chains were not willing to lower the markup for cosmetics, which helps pharmacies to earn, because this product range is not subject to any legislative markup restrictions, unlike in case of VEDs. Moreover, due to fierce competition, pharmacy chains have to lower markups for the drugs not included in the list, as well as dietary supplements. Cosmetic products remain within the group, for which the markup remains practically unvaried, and in 2020 it ever grew: in 2019 it was 39.5% and by the end of 2020 it rose to 43.5%.

Analysis of the monthly statistics shows that at the beginning of 2020 the market for pharmacy cosmetics saw a growing demand. But from May the interest towards beauty products started falling as compared with the figures for the previous year. Just like across the retail pharmaceutical market in general, the peak in sales of cosmetics was recorded in March. During the first spring month, volumes of sales of pharmacy cosmetics grew by 16.1% in value terms and by 11.2% in packages. On the contrary, in the second half of 2020, cosmetics sales saw a noticeable decrease, which added to the year-end negative dynamics.

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 availability of specialized product lines, clearly distinguished between each other and intended for a certain skin or hair state. As a rule, such types of cosmetics are

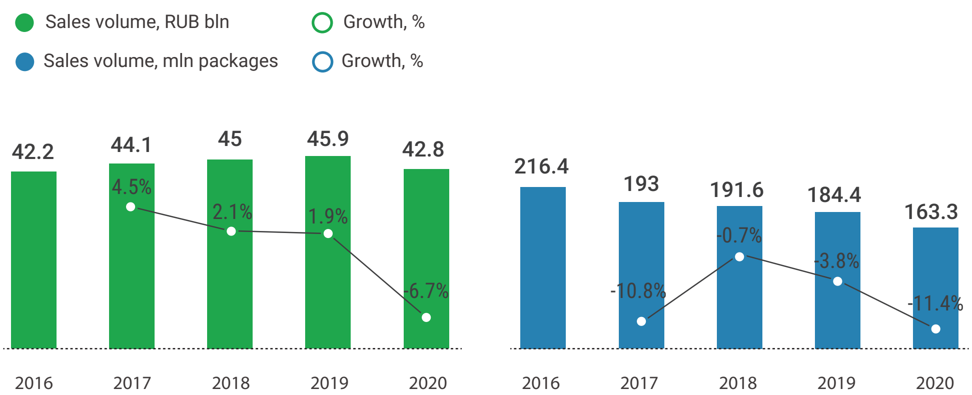


Figure 37

Динамика объёма продаж аптечной косметики в России sold mainly through pharmacies (Librederm, La Roche-Posay, Vichy, etc.).

Mass-market cosmetics – affordable cosmetics, intended for skin, hair and nail care and sold both through pharmacies and other points of sale (for example, Johnsons, Froresan, Nivea, etc.).

Whereas in roubles the sales structure shifted towards mass-market cosmetics, in packages there was a 1.2% increase in the share of medicinal cosmetics. Active (medicinal) cosmetics account for half the sales volume of all cosmetics and plays a major role in the dynamics of the pharmacy cosmetics market as a whole: -7.7% in roubles and -9.4% in packages. In a year pharmacies sold 856 brands of medicinal cosmetics from 466 manufacturers (4,482 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 unchanged against the previous year (by less than 1%). Premium cosmetics remain the most marginal category. Whereas in roubles it accounts for 36.1%, in volume terms the share of luxury cosmetics is distinctly lower – 10.3%. The downward trends in sales of selective cosmetics continued: -7.0% in value and -11.8% in volume. The drop is mainly on account of Uriage (-27.8% in roubles) and Librederm (-24.3%). This trend is just to be expected in the current situation: real household incomes keep declining, US Dollar and Euro exchange rates have noticeable increased against rouble, and the target customer audience is gradually switching over to the online segment.

Pharmacies do not constitute the main promotion channels for mass-market cosmetics. However, this subsegment accounts for 38.1% of market in kind and is popular among consumers, since it is represented by quite affordable products. That is why mass market cosmetics share amounts to 16.9%. In packages, this segment declined most of all. Most often, products of this category are purchased impulsively or in addition to some drugs. In 2020, customers were more conscious in their choices coming to pharmacies for particular products.

In 2020 the average price of a cosmetic product in retail pharmacy prices was 262 roubles per package. The price rose by 5.4% against 2019. If we look at the market, segment by segment, we can see that prices in all the categories have increased. Price of one package of active cosmetics has increased by 1.8%, premium products and mass market products prices have grown by 5.5% and 12.8% 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 36.0%). And it is not surprising as around 48.3% 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: 25.2%.

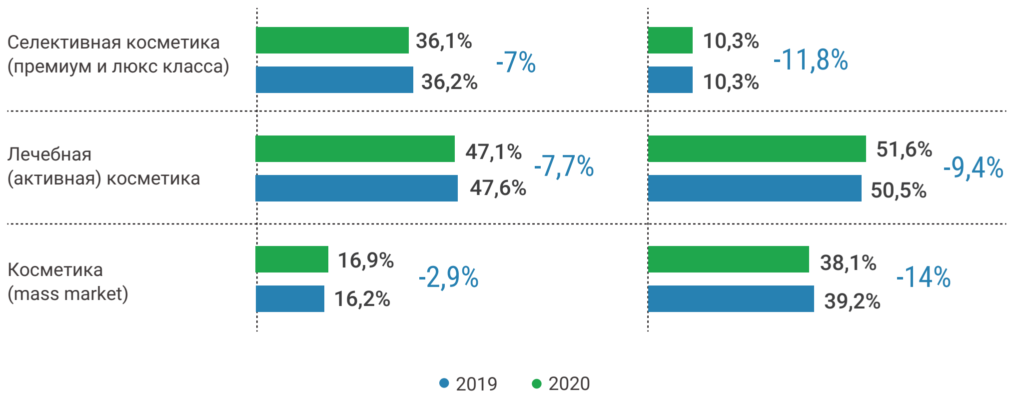
The five leading groups demonstrated negative dynamics. The worst drops in all the groups were observed in feet cosmetics (-19.6% in roubles) and hair and scalp products (-10.7%). In volume terms, the worst drops in sales volumes were for face skincare products (-29.7%), sales of lip and body care products fell by 20.3% and 15.2%, respectively.

The largest share in cosmetics structure according to age criterion is taken by cosmetics intended for all age groups (79.2% of sales volume in value and 80.0% in kind). The second place goes to the cosmetics for babies and children (from 0 to 14 years): 8.7% in roubles and 14.4% in packages. The third place is taken by cosmetics for young adults (older than 25), with the market share of 5.8% in roubles. There is a preponderance of high-priced premium and luxury cosmetics in this category – 78.2% of volume in roubles in this category belongs to selective cosmetics. The majority of products for middle age (after 45) are in the high price range, selective cosmetics hold around 71.7% of the sales volume in value. The segment of cosmetics for the elderly (over 60 years old) demonstrates the maximum rates of drops in money (-44.6%) due to a decline in the demand for premium brands: the share of luxury cosmetics for the elderly dropped from 26.3% to 5.8% in roubles.

Russian cosmetics are more in demand on the pharmacy market than imported brands, domestic cosmetic products sales share is more than 72.6% in kind. When analyzing sales

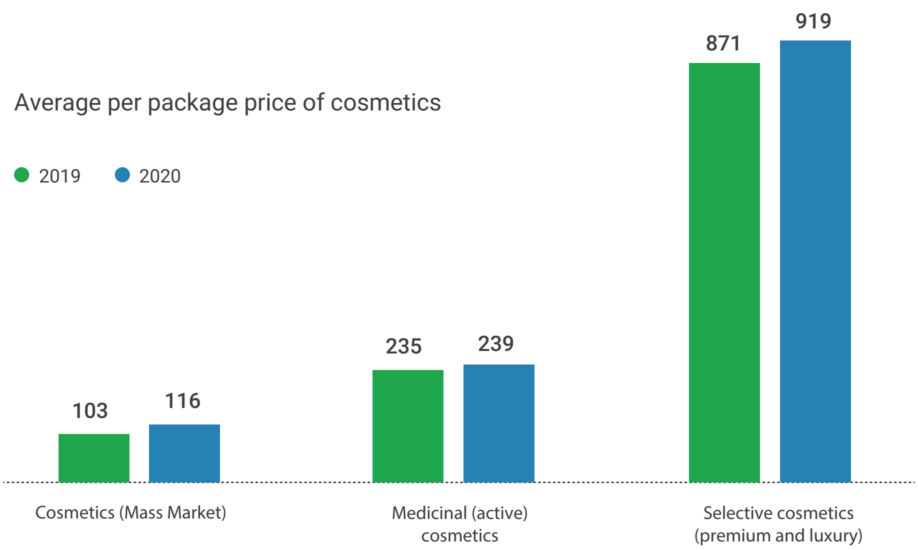
Structure and dynamics of pharmacy cosmetics sales, by product type, RUB

Structure and dynamics of pharmacy cosmetics sales, by product type, packages



Fugure 38

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



Fugure 39

Weighted average price of a cosmetic product in pharmacies volumes in roubles, it should be noted than the market is almost divided in half, but imported products prevail slightly (about 52.3% of sales).

Within segments the ratio of domestic and imported cosmetics differ significantly.

In 2020 premium cosmetics were mostly represented by imported cosmetic products, which hold 84% of the market in roubles and 64% in packages. Librederm, a Russian brand, has 99.8% of domestic selective cosmetic sales in roubles.

Medicinal (active) cosmetics segment is, on the contrary, mostly represented by Russian brands, that lead both in value (69%) and in kind (80%).

The share of domestically-made cosmetics in the mass market segment grew against the previous year by 7.3% in roubles and 4.5% in packages. The main made-in-Russia brands are: Detskiy Krem, Chlorhexidine and Moyo Solnyshko, which together occupy 26.8% of the market in roubles.

Selective cosmetics

In 2020 pharmacies sold 16.8 million packages of premium cosmetic products for around 15.4 billion roubles (in retail prices). Compared to the previous year, the sales dropped by 7.0% in rouble terms and by 11.8% in kind. Six brands from the top ten suffered a noticeable drop in sales against 2019.

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

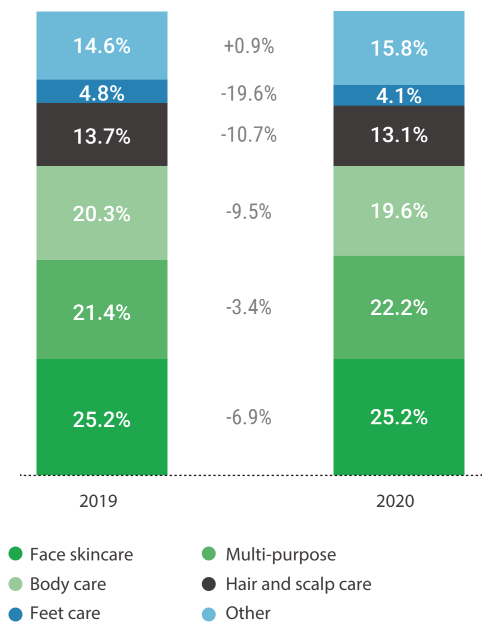
But most of all the demand for this category was surely affected by the macroeconomic situation. Due to high price, this market segment is vulnerable to decrease in the consumer purchasing power.

La Roche-Posay, a French brand, retained the first place, due to sales growth by 1.9%. The brand's market share increased noteworthily – by 2.4% to 27.2% in money terms. La Roche-Posay cosmetic products, formulated with thermal water, are specifically designed for problem skin, therefore 39.1% of the brand sales

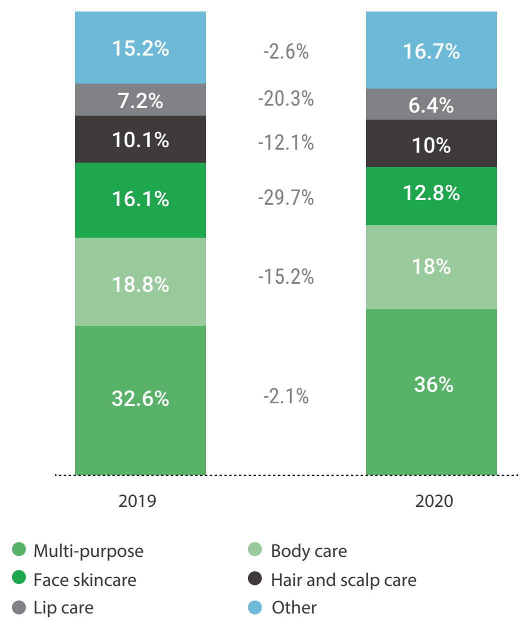
Fugure 40

Cosmetics Structure According to its Intended Purpose in 2020

Structure of pharmacy cosmetics sales, by intended purpose (RUB)



Structure of pharmacy cosmetics sales, by intended purpose (packages)



are made by Effaclar product line (product line designed for oily and problem skin care) and Lipikar (face products against irritation and itching).

At the end of 2020, Vichy cosmetics (-3.4%) went up to rank 2nd. The Vichy brand also increased its share in the segment of selective cosmetics (+0.7% to 20.0%). All in all, pharmacies sold 415 SKUs in product lines with an average price of 1,517 roubles. 35.0% of products are anti-ageing and wrinkle products [A13]. About 43.7% in value terms are taken by face care products, Vichy product line also has a rich assortment of body care (18.4%), hair and scalp care (18.1%) products.

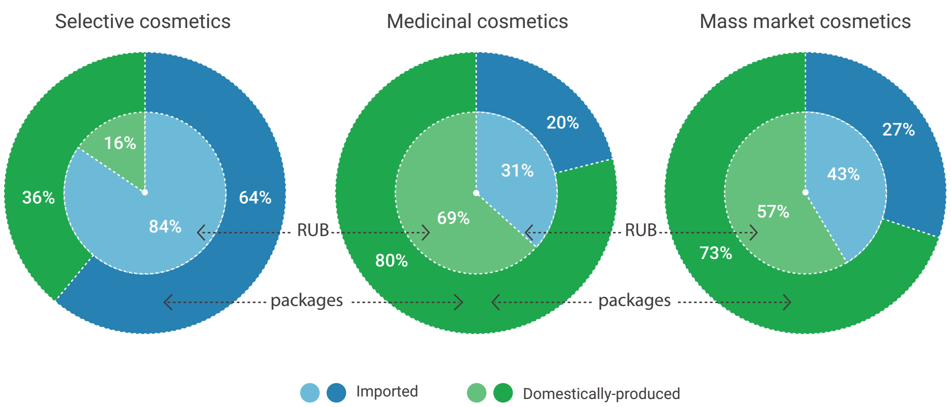
Librederm, a Russian brand, moved to the third place in the selective cosmetics category rating: the brand's market share shrank from 19.6% to 16.0% in the segment's value volume as a result of the sales drop by 24.3% compared to 2019. However, Librederm has 36.2% of sales volume in packages, therefore Librederm may still be considered the most popular brand of selective cosmetics among customers. Among other things, the drop in the brand's sales in pharmacies is due to the intensive promotion of the brand in its own stores and on various online marketplaces. Its product line incorporates 366 full product names, among them face care products have the largest share (62.0% in roubles).

The maximum growth rates were observed in CeraVe products for intense skin hydration (+78.7%; +3 position lines), which contain ceramides to repair and strengthen skin's barrier. The leading products within the brand are cleansers and moisturizers.

Medicinal cosmetics

Manufacturers market active cosmetics as products that not only solve aesthetic problems, but also have therapeutic properties. This group of cosmetic products dominates pharmacy market. Premium cosmetics mainly target facial skin problems, while medicinal cosmetics have a wider range of indications for use. The major part of sales of this assortment group belongs to the products used for treatment of strains, bruises, inflammation of joints (10.9% share in roubles), for various skin conditions and injuries – cuts, bruises, cracked skin, burns (9.2%), for skin prone to allergic reactions (8.5%).

TOP-10 brands account for 27.5% of active cosmetics sales, which is significantly lower than in the luxury brands segment (90.5%). This is partly due to the fact that selective cosmetics products lines are very wide and are aimed at solving a number of problems. Active cosmetics brands are usually promoted as products meant for addressing one specific problem. Consequently, the category range is



Fugure 41

Pharmacy cosmetics sales shares by origin depending on the type of cosmetic product in 2020

Table 22

Top-10 of selective cosmetics brands in 2020

Ranking	Change	Brand	Sales volume, mln roubles	Share, %	Growth, % 2020/2019
1	-	La Roche-Posay	**4,199.6**	**27.2%**	**+1.9%**
2	+1	Vichy	**3,090.1**	**20.0%**	**-3.4%**
3	-1	Librederm	**2,464.9**	**16.0%**	**-24.3%**
4	+1	Bioderma	**1,219.9**	**7.9%**	**+7.6%**
5	-1	Avene	**1,130.6**	**7.3%**	**-13.0%**
6	-	Uriage	**572.3**	**3.7%**	**-27.8%**
7	-	Mustela	**355.7**	**2.3%**	**-17.4%**
8	+3	CeraVe	**350.7**	**2.3%**	**+78.7%**
9	-1	Filorga	**300.7**	**1.9%**	**-12.9%**
10	-1	Ducray	**291.6**	**1.9%**	**+4.5%**

quite wide: pharmacies offer more than 850 brands of medicinal cosmetics.

Only the items in the lowest part of the rating experienced change in their positions. The first place among medicinal cosmetic products is taken by Loshadinaya Sila (Horsepower) (a 4.1% share in the group), despite the sales decline by 28.6%. Body care products, used for treatment of strains, bruises and joint conditions account for 46.2% of the brand's sales volume in roubles.

The second place goes to Lactacyd (3.6% share), a line of products for daily intimate hygiene, formulated with natural lactic acid, which helps to restore and maintain healthy microbiome of the intimate zone. Over the year, the brand's sales dropped by 1.9%. The product line includes around 20 product names. The biggest drop was observed for cosmetic wipes (-25.9%).

Alerana is a cosmetic product developed for hair and scalp care. Therefore 68.7% of products manufactured under this brand are shampoos. Despite a 6.9% drop in sales volumes, Alerana (a 3.3% share) remained on the 3rd position.

As was expected in 2019, the following brands maintained high growth rates and ranked among the top 10: a line of Lipobase family products for the treatment of sensitive, dry and irritated skin (+34.2%; +5 position lines), a line of Cetaphil daily sensitive skin care products (+20.2%; +4 position lines), and Zinovit zinc-based broad-spectrum products (+11.9%; +2 position lines) intended, for example, for prevention of dandruff, treatment of irritated and peeling skin, acne conditions.

No longer on the rating list are: a line of Mikostop anti-fungal dermatitis products (11th at the end of 2020), a line of Sofya creams (13th), and Pedikulen anti-lice and nit products (15th).

Mass-market cosmetics

Multi-purpose cosmetics constitute 38.6% of mass-market cosmetics and are mainly intended for cleansing (23.6%).

Changes in the rating of mass market cosmetics are more distinct than for the other categories. Only the top two brands managed to keep their previous year's positions. The first place traditionally goes to Johnson children cosmetics (6.7% share in roubles). Among the top three are also two Russian brands: Detskiy Krem (4.2%) and Kora (3.7%).

Seven out of ten brands holding the key positions had negative dynamics. The maximum drop in sales was observed for Umnaya Emal cosmetics (-24.1% against 2019), with the brand's portfolio covering a wide range of nail care products, and Novosvit anti-age medicinal cosmetics (-23.2%). In consequence, the brands moved two lines down on the rating list.

A notable growth was observed for Kleenex wet wipes, including antibacterial ones (+96.1%; +12 position lines) and Laino cosmetic products (+30.5%; +4 position lines): 45.7% of sold products are skin nutrition and repair products.

A distinctive feature of the rating of mass market cosmetics sold in pharmacies is a variety of baby/kids brands. 23.2% of products sold are products for babies and kids (0-14 years old). Three children's brands were included into the rating in 2020, they are the principal players in this category (they produce 60.7% (in roubles) of mass-market cosmetics for children, sold through pharmacies).

Table 23

TOP-10 brands of active (medicinal) cosmetics in 2020

Ranking	Change	Brand	Sales volume, mln roubles	Share, %	Growth, % 2020/2019
1	-	Loshadinaya Sila (Horsepower)	**836.1**	**4.1%**	**-28.6%**
2	-	Lactacyd	**727.4**	**3.6%**	**-1.9%**
3	-	Alerana	**665.7**	**3.3%**	**-6.9%**
4	-	911 Your Emergency Service	**596.2**	**3.0%**	**-12.8%**
5	-	Emolium	**493.7**	**2.4%**	**-10.1%**
6	-	Boro Plus	**473.6**	**2.3%**	**-10.2%**
7	+4	Cetaphil	**462.9**	**2.3%**	**+20.2%**
8	+5	Lipobase	**458.8**	**2.3%**	**+34.2%**
9	-2	Dry Dry	**417.2**	**2.1%**	**-14.3%**
10	+2	Zinovit	**403.3**	**2.0%**	**+11.9%**

Table 24

TOP-10 brands of mass-market cosmetics in 2020

Ranking	Change	Brand	Sales volume, mln roubles	Share, %	Growth, % 2020/2019
1	-	Johnsons	**483.3**	**6.7%**	**-4.9%**
2	-	Detskiy Krem	**300.5**	**4.2%**	**+2.6%**
3	+1	Kora	**264.3**	**3.7%**	**-6.4%**
4	+3	Moyo Solnyshko	**227.1**	**3.1%**	**-4.7%**
5	+5	Neutrogena	**205.5**	**2.8%**	**-1.1%**
6	+12	Kleenex	**190.0**	**2.6%**	**+96.1%**
7	-2	Novosvit	**189.5**	**2.6%**	**-23.2%**
8	-2	Umnaya Emal	**185.8**	**2.6%**	**-24.1%**
9	+2	EVO	**178.7**	**2.5%**	**-1.3%**
10	+4	Laino	**170.4**	**2.4%**	**+30.5%**

7. Pharmacy chains

The most important factor in survival is neither intelligence nor strength but adaptability.

Charles Darwin

What are the trends marking the pharmacy retail segment in 2020? First, implementation of those legislative initiatives that for a long time had existed as proposals. Second, the impact of the spread of the coronavirus infection and shifts in the trends that have become essential for the development of the pharmacy segment. All this dramatically changes the business environment that has been taking shape in the last 20 years.

Amid the coronavirus crisis, the President's decree accelerated the enactment of the distance selling law. And in April 2020, it became possible to sell OTC drugs in Russia online. The pandemic and the associated restrictions promoted the implementation of that decision.

The online selling concept with respect to drugs was formulated back in 2017. The trends emerging in other market segments evidenced that the problem was urgent considering digitalization of sales channels in all sectors, shifts in the consumer behaviour patterns and the consumer focus on e-commerce models. The pharmacy market was not an exception. Though officially the expression «online sales of drugs» appeared only in 2020, in fact the online market had existed long before. For many years consumers had reserved drugs online by picking 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.

The only question was about the legalization of home deliveries of drugs. The distance selling law permits market participants to deliver drugs to domiciles. The rules for being licensed to do that were formulated only at the end of May 2020. From then, Roszdravnadzor (the Federal Service for Supervision in Healthcare) started issuing permits. Among the basic requirements to be fulfilled by companies requesting permits to engage in distance selling of drugs are: a pharmaceutical license valid for at least a year, and no less than ten pharmacy outlets. Besides, it is required to have an electronic payment system or a mobile payment terminal and own courier service (or a contract with a specialized courier company).

At the end of 2020, about 350 companies were authorized to sell drugs on line (which corresponds to around 110 pharmacy chains or 12 thousand sales outlets).

Speaking about the year-end results, it can be said that the legalization of drug deliveries did not significantly change the market and its structure. Most consumers still preferred to order needed drugs online by picking them up later at a conveniently located pharmacy.

Table 25

Ranking of remote order services by sales turnover in 2020

Ranking	Marketing Association	Trmber of outlets	Volume, in billion roubles	Share in commercial segment, 2020	Turnover increase compared to 2019
1	Apteka.ru	**15,867**	**50.1**	**46%**	**3.6%**
2	Sber Eapteka	**731 (116*)**	**11.0**	**96%**	**0.8%**
3	Zdravcity	**15,828**	**6.3**	**134%**	**0.4%**

** own outlets*

There are several reasons for this. The first reason is that the law applies to OTC drugs only. Analysis of the online drug segment structure shows that Rx drugs are more in demand. According to the data for June-December 2020, Rx drugs ordered online accounted for 60.2% of the total volume of drugs (around 50% across the market). So, OTC drugs permitted to be delivered to domiciles accounted only for 39.8% of the online segment (10% less than across the market).

The second reason is that the general trend is towards promoting pick-up points and not courier delivery services and that consumers prefer pick-up to home delivery: they find it more convenient to go to a pharmacy where they can pick up the product and also get advice from skilled pharmacy staff. Another benefit is that they don't have to pay for delivery. The weighted average per package price of a drug ordered online is about 400 roubles, the average purchase amount is approximately 1.5 thousand roubles, so another 150-300 roubles (the cost of delivery) is not such a small sum.

Despite all problems and restrictions, the online (reservation and delivery) market is growing fast. In 2020, pharmacy eCom was worth around 93.2 billion roubles (drugs and parapharmaceuticals), which corresponds to 6.6% of the pharmacy market capacity. In December, the figure grew already to 8.2%. Whereas the sales dynamics across the market makes for around 10%, the online turnovers grew against 2019 by 62%. It should be noted that at the moment the online option is appreciated mainly by people living in Moscow. In the capital, Pharmacy eCom accounts for 14.5% (i.e. 2.5 times more than across Russia on average). So, one third of all drugs ordered online are sold in Moscow.

At the beginning of 2021, the Ministry of Health of Russia proposed a draft governmental decree eliminating the requirement to have no less than ten stationary pharmacies in order to be permitted to sell drugs online. It was supposed to equalize large chains and smaller local players. The amended rules will make it possible also for online marketplaces and aggregators to offer drug delivery services. The aggregator owner will have to get Roszdravnadzor's authorization to make a contract with a pharmacy chain (and will be able to contract with several chains at a time). To get such an authorization, the aggregator must be registered for at least a year, the aggregator's revenues for the last year must be no less than 5 billion roubles, and the aggregator must be able to make deliveries at least to 10 regions. The total number of Website users or applications of the aggregator's owner must be at least 500 thousand during the year preceding the filing of the application to Roszdravnadzor. So, major aggregators such as Yandex, Mail.ru, Ozon and Wildberries will be able to sell OTC drugs.

So far, only Ozon has got Roszdravnadzor's distance selling authorization. Wildberries is selling parapharmaceuticals only; Yandex is cooperating with partner pharmacy chains and delivers orders to pharmacies. Mail.ru has organized Delivery Club deliveries on the basis of the technical capability of the «All Pharmacies (Vse Apteki)» service.

Furthermore, for the first time the Ministry of Health proposes regulating deliveries of orders to pick-up points. Drugs may be delivered to pick-up points located in pharmacies. And it remains the pharmacy's duty to present, if requested so by the buyer, data on the organization that has made up the order.

For the last 10 years, any pharmacy segment development overview started with the results of consolidation that was driven primarily by deals on mergers and acquisitions of the market participants: major and local players. Also in this respect, the year of 2020 turned out to be unprecedented. Consolidations of chains through acquisitions were few and local; there were no big deals to noticeably re-arrange the federal or regional ratings. Unlike in the period before the pandemic of the coronavirus infection, not many companies aspired to develop their business by opening new outlets.

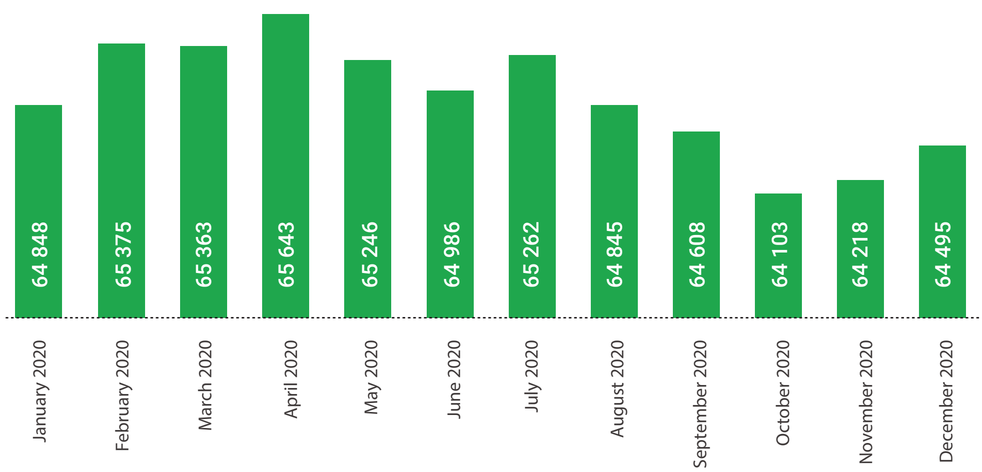
This downward trend significantly affected the dynamics in the number of outlets during the year. Until March, the number of newly opened pharmacy outlets had been traditionally increasing, but with the imposition of restrictions their number started decreasing. Slightly positive dynamics was observed only towards the end of the year. According to the data for December 2020, there were 64.5 thousand pharmacies in Russia, which is only 1.5% more than a year earlier (+540 outlets)

The increase in the number of pharmacies is due to the development of federal (+1,100 outlets) and inter-regional (+1,445 outlets) chains. The number of standalone outlets and

Figure 42

Number of pharmacy outlets in Russia

Dynamics of the number of pharmacies



small chains sees a continuing decline (-1,480 outlets in 2020).

In 2020, the pharmacy market capacity was 1,407 billion roubles. (+10% as compared to the previous year). The total number of TOP-20 chains grew by 15% in 2020 as compared to the same period of 2019. The share of the TOP-20 was 68%, which is 3% higher than in 2019. The Figure shows that the concentration is mainly due to the companies ranking the 5th to 10th, which resulted in the growth of the TOP-10 share by 11% in 4 years. But the share of the TOP-3 increased by only 3% (1% per year) as compared to 2017.

Figure 34 shows the growth of turnover and number of outlets in the top 20 pharmacy chains in 2017-2020. In 2020 the TOP-20 include 36 thousand pharmacies, which is only 16% more than in 2019. In the 2020 rating, 11 chains have more than 1,000 outlets.

ASNA was the leader by the number of newly opened outlets. By the end of the year, the chain had 2,555 pharmacies more than in 2019. Among traditional pharmacy chains the consolidation list was led by April (+413 outlets): the chain extended its footprint over 53 constituent entities of the Russian Federation (5 regions more than in 2019). Rigla added 290 outlets. Next comes Imposia with 240 newly opened pharmacies.

The last on the list by the number of newly opened outlets in 2020 was Magnit: it opened only 1 more pharmacy. During the year, the chain kept opening new pharmacy outlets: it added around 200 pharmacies to come, as on September 1, to 1,326 outlets. But in the 4th quarter the retailer launched the process of optimization and, as a result, closed 185 ineffective outlets. In January 2021, it closed something like another 70 outlets. All in all, by the end of 2020 the chain had 1,158 pharmacies.

In the pharmacy business segment Magnit launched its first e-commerce project – an online pharmacy. At present, the chain has more than 100 pick-up points in Moscow and the Moscow Region, with nearly 5,000 pharmaceutical and cosmetics items and other products. On the basis of its online pharmacy project, the chain plans to try out its own delivery model.

The table shows the rating of pharmacy

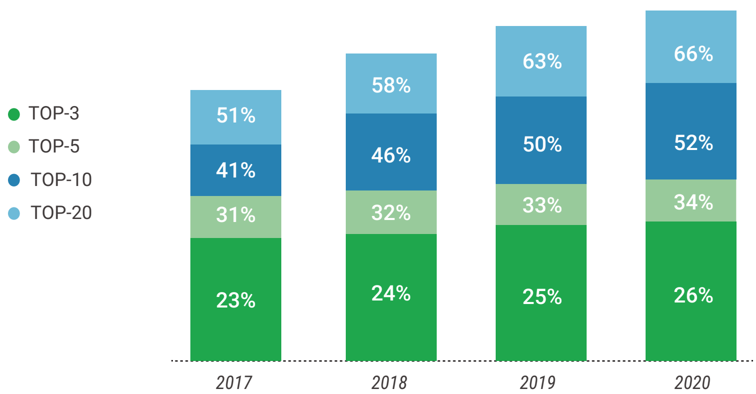


Figure 43

Concentration of TOP-20 Pharmacy Chains

chains in the for-profit sector with quantitative and monetary measures of development in 2020.

The first place in the rating still belongs to ASNA, which includes 11.9 thousand outlets. ASNA unites independent organizations with a single pricing policy, promotional campaigns, discount programs, etc., which makes it a single structure in the eyes of manufacturers. According to the 2020 results, the share of ASNA made 14.4%.

ASNA's partners are supplied with off-the-shelf customized solutions that cover product mix handling, personnel training and e-com solutions. In 2020, the company started testing a new format: offering foodstuffs, household products, a coffee house and a pharmacy within a space of 50-80 sq. m. In August, it opened its first multi-format retail outlet.

For the promotion of such initiatives, in 2020 ASNA got additional financing. At the end of the year, Gazprombank acquired a minority stake in the company. The investments from the deal will be used to develop ASNA's IT platform, promote its online sector and help it enter other segments of the retail market.

Among traditional pharmacy chains the lead is kept by Rigla. At the end of the year, the company's share grew to 6.7% (+0.4% against 2019 year-end). In 2020, the number of its outlets grew beyond 3 thousand. Only one more company on the rating list has so many pharmacies.

In 2020, the company doubled also the number of the regions of its presence – to 63 constituent entities of the Russian Federation. The chain is growing, among other things, through expansion into new regions of the companies incorporated in the Rigla pharmacy chain. For example, Zhivika pharmacy discounter (incorporated in Rigla) started last year its expansion to Siberia. Its first outlets opened in September. In 2021, Zhivika is going to open another 30-40 pharmacies.

From October 25, 2020, pharmacies were allowed to dispense drugs by electronic prescriptions, as per Order of the Ministry of Health of Russia No. 683n dated 07.07.2020.

Figure 44

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

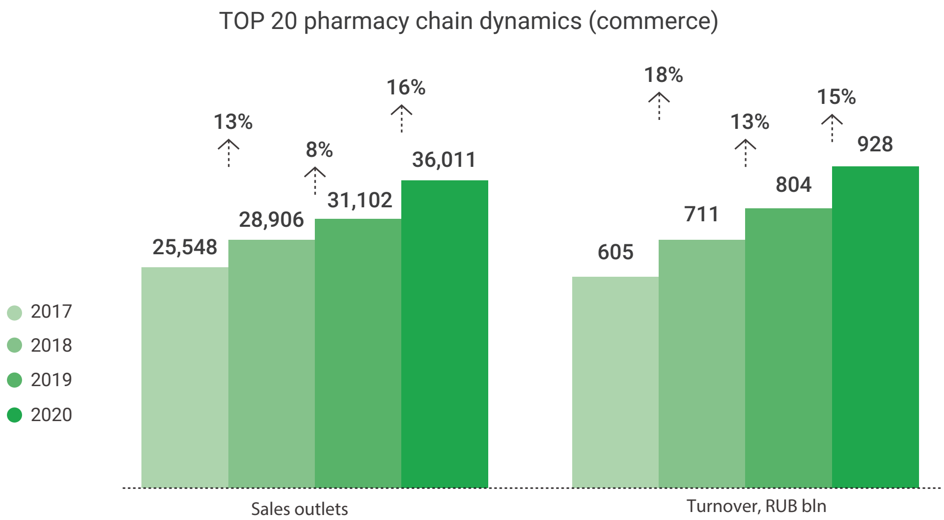


Table 26

Ranking of Pharmacy Associations by Sales Turnover in 2020

Ranking	Pharmacy chains	Volume, in billion roubles	Share in commercial segment, 2020	Turnover increase compared to	Number of outlets
1	ASNA	202.9	14.4%	13%	11,900
2	Rigla	94.4	6.7%	17%	3,136
3	Erkapharm	67.6	4.8%	4%	1,079
4	Pharmacy chain 36.6	60.0	4.3%	17%	1,461
5	Planeta zdorovya	59.5	4.2%	29%	1,826
6	April	52.1	3.7%	33%	1,892
7	Neo-pharm	51.5	3.7%	17%	820
9	Implosia	50.6	3.6%	5%	3,305
8	IRIS	50.3	3.6%	13%	1,792
10	Vita (Samara)	46.9	3.3%	11%	1,817
11	Pharmland	35.5	2.5%	18%	1,320
12	Melodiya zdorovya	25.5	1.8%	22%	842
13	Pharmaimpex	22.8	1.6%	3%	661
14	Maxavit	21.0	1.5%	25%	664
15	Apteka ot sklada	18.1	1.3%	-6%	841
16	Zdorov.ru	16.1	1.1%	1%	90
17	Pharmaceut+	14.2	1.0%	5%	510
18	Nevis	13.1	0.9%	30%	546
19	Gubernskiye apteki	12.7	0.9%	32%	351
20	Magnit	12.6	0.9%	147%	1,158
21	IDEA	10.8	0.8%	8%	210
22	Peterburgskiye apteki	8.9	0.6%	4%	86
23	Zdorovye (Ust’-Labinsk)	8.1	0.6%	21%	176
24	Aloe	7.4	0.5%	21%	272

25	Monastyrev.rf	**7.4**	**0.5%**	**27%**	**96**
26	Antey	**6.9**	**0.5%**	**6%**	**495**
27	Pharmeconom	**6.5**	**0.5%**	**3%**	**162**
28	Nadezhda-Pharm	**5.9**	**0.4%**	**57%**	**300**
29	Edelweiss	**5.8**	**0.4%**	**1%**	**206**
30	Volgopharm	**5.6**	**0.4%**	**9%**	**156**
31	Aptechnye traditsii	**5.3**	**0.4%**	**24%**	**326**
32	Garmoniya zdorovya	**4.3**	**0.3%**	**17%**	**152**
33	Aliya-Pharm	**4.1**	**0.3%**	**2%**	**138**
34	Pharmatsia NN	**3.9**	**0.3%**	**9%**	**280**
35	Sovetskaya Apteka	**3.8**	**0.3%**	**5%**	**288**
36	Deshevaya Apteka	**3.6**	**0.3%**	**-20%**	**80**
37	Vasha No. 1	**3.5**	**0.3%**	**26%**	**60**
38	Dialog	**3.3**	**0.2%**	**2%**	**70**
39	Serdtse Rossii	**3.2**	**0.2%**	**10%**	**211**
40	O'Vita	**3.0**	**0.2%**	**9%**	**102**
41	Vita-plus	**2.9**	**0.2%**	**33%**	**197**
42	Arbik	**2.7**	**0.2%**	**35%**	**140**
43	Bryanskpharmatsiya	**2.7**	**0.2%**	**31%**	**138**
44	MFK Severo-Zapad	**2.5**	**0.2%**	**31%**	**94**
45	Pharmiya	**2.4**	**0.2%**	**37%**	**158**
46	Semeynaya apteka (Blagoveshchensk)	**2.4**	**0.2%**	**-6%**	**195**
47	Biotec	**2.1**	**0.1%**	**11%**	**264**
48	Stolichnyie apteki	**2.0**	**0.1%**	**13%**	**73**
49	Vita Nord	**2.0**	**0.1%**	**9%**	**84**
50	MRFK	**1.9**	**0.1%**	**62%**	**57**

Table 27

Ranking of Marketing Associations by Sales Turnover in 2020

Ranking	Marketing Association	Number of outlets	Volume, in billion roubles	Turnover increase compared to 2019	Share in commercial segment, 2020
	Pharmmarket.ru	**9,170**	**218.55**	**50%**	**15.5%**
	ProApteka	**7,589**	**118.21**	**44%**	**8.4%**
	MFO	**5,277**	**92.32**	**33%**	**6.6%**
	Sozvezdiye	**4,410**	**62.33**	**136%**	**4.4%**
	Vesna	**1,453**	**21.95**	**19%**	**1.6%**

The order defined a list of drugs and modes of their dispensing by electronic prescriptions. An electronic prescription is required to be certified with a medical officer's signature. Regions must authorize the use of such prescriptions. Drugs may be dispensed by e-prescriptions that have been issued in the territory of the region, in which a pharmacy connected to the Uniform State Health Information System is located.

In fact, e-prescription dispensing has been tested in a pilot mode in Moscow since February 2021. The e-prescription dispensing project has been launched in all pharmacies within the jurisdiction of the Public Health Department and in several commercial pharmacy chains. Rigla has joined the project (about 400 pharmacies). There are more than 750 pharmacy outlets in the city that accept electronic prescriptions.

The issue of the scope and depth of the state regulation of the pharmacy market has never ceased to be under debate. In February 2021, amendments to the laws on the circulation of drugs and on the fundamental healthcare principles, which proposed limiting the number of pharmacies within big chains (maximum 20% by the region's share), were passed in a first reading. The amendments formalize the notions of «pharmacy chain» and «mobile pharmacy unit».

The current classification of pharmacies will cease to be in force from 2021, and the Ministry of Health of Russia has proposed a new draft classification (Draft Order of the Ministry of Health of Russia «Concerning the Approval of Types of Pharmacies»). Pharmacies, pharmacy outlets and pharmacy kiosks will remain (only compounding pharmacies will become now «compounding pharmacies authorized to manufacture drugs»). The new classification offers a new format: sole trader with a pharmaceutical license (sole trader pharmacy).

Pharmacies will be divided into sub-categories: pharmacies engaging in retail trade (dispensing) of drugs to the population (standalone pharmacies), and pharmacies as units within medical institutions.

Of more importance for the industry appear to be the amendments that set manufacturer bonuses at 5% and limit grace periods for distributors to 90 days. Turnover periods in pharmacy retail are longer than in distribution networks. In this context, restraints on grace periods may lead to cash gaps and large pharmacy chains will more quickly make up for such gaps because of large amounts of products in circulation.

Control over marketing bonuses will «wash away» cheap drugs from the market and drive up prices for drugs as pharmacies will be forced to disburden loss of bonuses on the consumer. Most of all this initiative can affect standalone pharmacies and small local chains that now are able to get some extra income by joining various marketing associations, which can offer them manufacturer stocks by attracting large numbers of pharmacies.

8. Distributors

The one who gives is a more reliable friend, because he, by virtue of his kindness, keeps the memory of gratitude.

Pericles

With all its challenges, the year of 2020 tested the distribution sector for strength. In many respects, the distribution sector was the key element for uninterrupted supply of the population with drugs: timely delivery of drugs to pharmacies, dealing with manufacturers to make up for emerging shortages – the importance of these and other aspects once again showed that distributors are indispensable and essential for the supply chain.

The key topic of the year is undoubtedly Covid-19 and its impact on the pharmaceutical market and its participants. The analysis of the official statistics shows that in 2020 wholesale supplies of pharmaceuticals gained more significance. According to the State Statistics Service, the wholesale turnover in Russia in 2020 was 83.7 trillion roubles or 99.9% (in comparable prices) by 2019. The share of companies engaged in wholesale trade in pharmaceutical products and medical devices in this volume is 9.3% (in 2019 the number was 8.5%). The share of pharmaceutical wholesalers in the overall structure grew by 0.8%.

There are several factors accounting for that. First, in the crisis period the pharmaceutical industry remains one of the few sectors where sales keep growing. The 2020 crisis involves not only macroeconomic factors but also public health. The demand for drugs never decreased. Second, the government allocates extra public funds for the provision of drugs. For the last two years, the allocations of funds on the existing programs (the national cancer project, in the first place) as well as on new projects (in 2020, heart diseases projects received extra funding) have been growing.

The latter has a material impact on the rating of pharmaceutical distributors. Companies holding a substantial share in the public segment demonstrate higher dynamics than those focused more on the commercial segment. It is only natural that such distributors may extend their focus also onto this sector of the market. The more so that in addition to «stable» financing, new sub-segments are coming into view.

Vaccines are expected to become one of the main tools to fight the spread of the coronavirus infection. In December, the Government put vaccines to prevent the novel coronavirus infection on the VED list and registered the maximum vaccine sale price. Three vaccines were registered in Russia. Two of them, different by forms, have been developed by the Gamaleya Research Institute of Epidemiology and Microbiology (Sputnik V); the third vaccine has been developed by the Vektor State Research Center of Virology and Biotechnology (EpiVacCorona).

The price of Sputnik V is 1,942 roubles for two components. The registered price per package of five two-component vaccine sets is 9,710 roubles.

According to expert estimates, Russia may annually need around 70 million doses of the vaccine to prevent the novelty coronavirus infection (to vaccinate 50% of the population, similarly to the influenza vaccination). If so, expenditures on buying vaccines may come to around 140 billion roubles. In this way, a totally new market segment is taking shape and it is going to be publicly funded. A distributor that wins a supply tender will have all the opportunity to substantially improve its market position.

In fact, the central topic of 2020 was supposed to be the process of labelling that had been scheduled to be in full effect from July 1. Covid-19 had both positive and negative effects on the process. In order to ensure uninterrupted provision of drugs, the launch of the labelling regulations was provisionally postponed, first until November 1, and then the process was simplified until February 1, 2021. Thus, businesses were given more time to fine-tune all the processes and solve arising problems. On the other hand, the initiative was not cancelled altogether and effective dates were not postponed for a long time and distributors had to go on with preparations also during the period of remote work and at the times of the increased demand when they had to work yet harder.

The situation became particularly complicated when unlabelled items started disappearing from wholesalers' warehouses and labelled products could not be accepted according to the set rules. As a result, pharmacies were facing shortages and blamed distributors for overpricing unlabelled drugs.

Figure 45

Concentration in the Distribution Segment

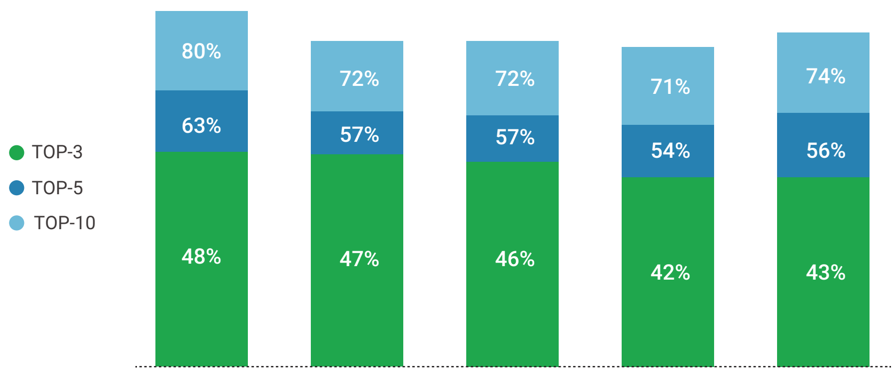


Table 28

Top 15 Distributors on the Pharmaceutical Market

Ranking	Distributor	Volume, in billion roubles	Increase	Share
1	Puls	254.2	15%	14.7%
2	Protek	241.5	5%	14.0%
3	Katren	239.2	16%	13.8%
4	R-Pharm	132.7	41%	7.7%
5	Pharmcomplect	106.7	16%	6.2%
6	Grand Capital	94.9	33%	5.5%
7	BSS	66.5	15%	3.8%
8	Profit-med	57.0	16%	3.3%
9	«Asfadis» Association	43.2	4%	2.5%
10	Biotec	41.1	102%	2.4%
11	Lancet	38.4	29%	2.2%
12	Pharmimex	38.2	0%	2.2%
13	Avesta Pharmaceuticals	36.9	12%	2.1%
14	G.D.P.	36.6	-16%	2.1%
15	Magnit	33.3	8%	1.9%
16	Irwin 2	31.9	14%	1.8%
17	Agroresursy	31.0	36%	1.8%
18	Euroservice GC	23.4	-2%	1.4%
19	ZdravServis	19.7	14%	1.1%
20	Medipal-onko	14.6	10%	0.8%
21	Pharmstor	12.4	29%	0.7%
22	Severo-Zapad	11.5	37%	0.7%
23	Pharmline	9.2	167%	0.5%
24	Volgopharm	7.3	19%	0.4%
25	Medintorg	7.2	6%	0.4%

Though if one recalls that the labelling primarily aimed at excluding falsification of drugs, then wholesale processes added to the overall drug movements do not improve informational content and only increase the burden on the public information system. In this light, Puls distributor suggested excluding the distribution segment from the mandatory labelling system.

Back to the results of the year and the distributor rating, it is of note than for quite a time the market lacks a clear leader and the competition over the top position never ends. In the last few years, three companies have been incessantly claiming leadership.

At the end of 2020, for the first time Puls came on top of the annual distributor rating list. It should be mentioned that in the 2019 interim ratings Puls did happen to take the lead but at the end of the year ranked only second. In 2020, the company appeared to be leader at the end of each quarter. The result was expected. Looking at the ratings of previous years, we can see that in 2010 the company was only the 8th with a share of 2.5%. Over 10 years, the turnover of the company has increased by 19 times. This was achieved through a balanced strategy of expansion into the regions, as well as the refusal to develop its own pharmacy chain, so that retailers do not perceive the company as a competitor. By today, the company has established a chain of 14 regional technologically advanced warehouse complexes covering all Russia. For big pharmacy chains, the company offers 3pl services (for example, Health Planet pharmacy chain, ASNA). The services include storage of products, collection of orders, and delivery throughout Russia. A similar project has been developed also for manufacturers.

Puls also chose to create and develop a marketing association. More than 4.4 thousand pharmacies are currently integrated into the union «Sozvezdiye», the growth by 2019 was almost 2.4 times.

At the end of 2020, Puls is the leader both on the market as a whole and in its particular commercial segment. The company has not yet taken a strong hold of the «promising» market for public procurement, but is planning to advance in that direction.

In 2020, Protek ranked second with a 14.0% share. The company showed a 5.3% increase in sales.

Last year, the distributor marked its 30th anniversary. This is the «oldest» company on the rating list. For a long time, Protek remained the major player on the wholesale pharmaceutical market. And though the environment changes from year to year, it has always been among the top 3. We congratulate Protek with its anniversary and wish it new heights, effective business solutions and onward progress ever!

In its course of development, Protek often turned out to be an influencer of new trends such as diversification of business, promotion of own retail, establishment of a pharmacy association. The company never stops trying out various patterns that then are followed by the market. Authorized online sales of over-the-counter-drugs triggered a new stage of development in online trading services. ZdravCity online portal for ordering drugs and beauty and health products, which makes part of the Protek holding company, grew in 2020 by 2.3 times to augment business volumes to 6.2 billion roubles. In the middle of June, ZdravCity started functioning as a marketplace where buyers may order products of third-party suppliers at www.zdravcity.ru. The first to get connected to the marketplace was the Gradient group of companies, a leading Russian distributor of consumer goods. Around 2 thousand new beauty and health products extended ZdravCity's product line. By the end of 2021, ZdravCity is going to augment the product mix to 100 thousand items.

It was to be expected that the marketplace would keep developing and, in addition to ordering options, would offer delivery of OTC drugs and parapharmaceuticals. In July, CDEK became ZdravCity's courier delivery partner; in November, the company signed a contract with SberLogistics.

The third spot of the ranking was occupied by the distributor «Katren» whose turnover increased by 16%. On December 25, S&P Global Ratings published a report on the international corporate rating of the company, according to which the company's credit rating is BB-/B, Stable. Katren is the only Russian pharmaceutical distributor to be assigned a credit rating by an international rating agency.

Katren was one of the first to launch online reservation services. The service «Apteka.ru» had sales of 50.1 billion roubles at the end of the year, which is 1.5 times higher than in 2019. Developing the service requires enhancing the logistics capacities. In September 2020, Katren's Krasnodar branch announced that it had modernized and extended its warehouse complex. The warehouse complex in Krasnodar had to be extended because the volume of the orders via Apteka.ru had increased by 1.5 times, and because the company wanted to extend the warehouse product line.

The service has surely gained acknowledgement and popularity as Apteka.ru has been put on the list of free-of-charge socially significant resources. From April 1 to July 2020, Russia made an experiment for the wireless Internet users to visit socially significant resources for no fee. Among the participants were 391 resources, including Apteka.ru.

High growth rates were demonstrated by the companies ranking below the 5th place: Grand Capital (+33%), and Agroresursy (+36%). Both companies work mainly with pharmacies. As a result, in the pharmacy segment distributors rank higher than for the market in general. Grand Capital ranks fifth with a 7.1% share (the sixth position in the general rating).

Agroresursy was among the top 10 at the end of 2020 in the pharmacy sales segment, ranking 9th (only the 17th on the market in general). The distributor is rapidly growing, in particular, by opening new branches: in January 2020, it opened a branch in Nizhny Novgorod. All in all, the company has 9 branches and 3 units.

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

The first among the «traditional distributors in the public sector» (excluding manufacturers that win supply tenders) is R-Pharm. The company's total turnover is 132.7 billion roubles, 57% of which are publicly funded.

R-Pharm is a group of companies engaging in distribution and production. In 2020, R-Pharm

Table 29

Top 10 distributors by segments

	Pharmacy segment		Public procurement	
Ranking	Distributor	Share	Distributor	Share
1	Puls	**21.7%**	R-Pharm	**12.2%**
2	Katren	**20.6%**	Pharmimex	**6.1%**
3	Protek	**18.9%**	Biotec	**5.9%**
4	Pharmcomplect	**8.2%**	Irwin 2	**5.0%**
5	Grand Capital	**7.9%**	BSS	**4.7%**
6	Profit-med	**4.4%**	G.D.P.	**3.6%**
7	BSS	**3.3%**	Protek	**3.5%**
8	SIA (Magnit)	**3.0%**	Lancet	**3.5%**
9	Agroresursy	**2.8%**	Euroservice GC	**3.3%**
10	Avesta Pharmaceuticals	**2.8%**	Avesta Pharmaceuticals	**2.4%**

and Sberbank announced they had closed a deal on co-investing in SBER EAPTEKA, with a 45% share for each. 10% remained with Anton Buzdalin, SBER EAPTEKA's founder and CEO. So, now R-Pharm holds assets across the entire supply chain.

Though it was a difficult year, the distributor never stopped an intensive expansion of its production facilities. In summer, the company started the construction of biotechnological facilities in the new building of R-Pharm's plant in Yaroslavl. The facilities are planned to be used for manufacturing the Gamaleya Centre's vaccine against the coronavirus infection.

The manufacturing capacities in Yaroslavl were expanded also through the purchase of the Teva plant at the end of 2020. As before, the plant produces drugs for the treatment of cardiac and neurological diseases and endocrine disorders. The plant's design capacity is nearly 2 billion tablets a year.

Second in the public sector segment is Biotec. The company demonstrated one of the highest growth rates, having almost doubled its revenues. One of the factors accounting for such dynamics was that in 2020 Biotec became the largest supplier of drugs and medical products used to fight the pandemic, including antivirals. From June, the company has been widely supplying drugs under INN Favipiravir, in particular, Avifavir and Areplivir, to all the regions. Besides drugs, the distributor supplied BIOZEK diagnostic test kits and disinfectants. Biotec's shipments totalled 45 billion.

Biotec's production projects cover several areas. One of them is a line of Renaissance mineral vitamin complexes (nutraceuticals), registered as DS. Another sector of Biotec's production activities are disinfectants, made by the BIODEZ plant. During the pandemic, the plant launched the production of skin antiseptics. The company's diversification efforts are not only for drugs but also for medical devices. The company can already boast its first devices and instruments for laparoscopic surgery.

The rating lists companies operating on the public market in niche specializations. For example, Irwin 2. 75% of the company's portfolio are in the segment of oncology or benefits. In 2020, the distributor focused its efforts on the cardio program and gained the lead in it. Among the key drivers were the blockbusters such as Xarelto and Pradaxa.

As noted above, the public procurement market is growing faster than the commercial segment, by attracting for that reason only traditional wholesalers but also businesses from other sectors. The process of purchases of drugs at the expense of public funds is proposed to be run in two ways: purchase of drugs as such and purchase of logistics services. Over 25% of the value of public contracts for supply of drugs are distribution expenses. To enable manufacturers and not intermediaries to earn, it is suggested to split the public procurement process into two separate procedures: determining who will supply drugs and deciding who will deliver them. Russian Post can be a Single Logistics Operator. An experiment on separating purchases of logistics services and those of drugs will be run in the Stavropol Krai. If the initiative proves to the successful, the public procurement market will be no longer available for traditional distributors.

Russian Post, in its turn, is looking for a possibility to enter the pharmaceutical market. The company intended to engage in delivery of drugs after their online sales were authorized. At the beginning of 2021, Russian Post launched in test mode a Website for sale of drugs and is delivering drugs to two pharmacies in rural post offices in the Samara Region. Russian Post started opening pharmacies at the premises of its post offices in 2019. All in all, it has 11 pharmacies opened in its post offices in Russia.

Another proposed initiative suggests allowing deliveries of also Rx drugs. The State Duma deputies are going to propose to the government launching a pilot project on distance sales of Rx drugs. For now, the proposal concerns deliveries of such drugs to subsidized residents of remote areas. The project can be implemented on a full scale only after e-prescriptions go mainstream.

9. Manufacturing

One completed effective task is worth fifty half-finished tasks

Malkolm Forbs

2020 was marked by the development of initiatives suggesting options for the treatment and diagnosis of the coronavirus infection. Many companies readily embarked on the task, by manufacturing test kits or drugs. The trend is distinct both on the Russian pharmaceutical market and worldwide.

A top priority was the development and manufacturing of Covid-19 vaccines. According to the World Health Organization (WHO), in February 2021 around 250 vaccines were under development worldwide (69 vaccine candidates were in clinical trials, and around 180 – in pre-clinical studies). In the year of the coronavirus, the processes of development and testing that generally last many years took only several months. The manufacturing of a vaccine turned out to be a test for the performance of the healthcare system in general.

In 2020, only a few manufacturers managed to complete clinical trials and get authorizations for emergency use of their vaccines in more than one country. Those are American Moderna and Pfizer collaborating with German BioNTech, British AstraZeneca with the vaccine from the Oxford University, Russian Gamaleya Research Institute of Epidemiology and Microbiology and Chinese Sinopharm. All of them have contracts for supply and manufacturing of their drugs in many countries of the world. The European Union and other states seek to diversify vaccine suppliers to avoid any shortages.

In Russia, a large-scale vaccination of the population started on January 18, 2021. At the end of 2020, Russia had two registered Covid-19 vaccines: Sputnik V (Gam-Covid-Vac) made by the Gamaleya Research Institute of Epidemiology and Microbiology and EpiVacCorona made by the Novosibirsk Vector State Research Center of Virology and Biotechnology. In February, another Russian vaccine was on the list: CoviVac developed by the Chumakov Centre.

In addition to the vaccines, the Russian market saw also drugs that were recommended for the treatment of the coronavirus infection. In summer, it was discovered that Fujifilm Toyama Chemica's Japanese antiviral Avigan (INN FAVIPIRAVIR) was effective in fighting Covid-19. The patent expired in 2019, so Russian companies could promptly start the manufacturing of generics under INN FAVIPIRAVIR. 4 plants got approvals for manufacturing registered drugs: Promomed (Areplivir brand name), R-Pharm (Coronavir brand name), Pharmasyntez (Favibirin brand name) and Chromis (a joint venture by RDIF and ChemRar, Avifavir brand name).

Table 30

Key manufacturing sites launched on the Russian pharmaceutical market in 2020

Initiator	Region	Description	Capacity	Investments
Evalar CJSC	Biysk	Launch of the second synthetic drugs line at the new production facilities in the Altai Krai. The company is increasing the manufacturing capacities in order to extend its own drug portfolio and to expand contract manufacturing	1 billion tablets and capsules a year	3 bln roubles
Escom NPK OJSC	Stavropol	A new line for production of infusion solutions in polymer vials	Up to 72 million vials a year	
VERTEX JSC	Novoorlovskaya site, Saint Petersburg SEZ Saint Petersburg	The pharmaceutical company launched innovative manufacturing facilities, having completed Phase 3 construction project. The facilities will be used to increase the production of the existing products and to create one-of-a-kind original combined drugs	After Phase 3 is launched at full capacity, the output of the pharmaceutical facilities is scheduled to exceed 200 million packages a year	7.3 bln roubles (Phase 3 - above 2.4 bln roubles)
Sintez OJSC (Biocom CJSC subsidiary)	Kurgan (Stavropol)	The company expanded its capacities to manufacture Hydroxychloroquine, one of the drugs put by the Ministry of Health of Russia on its guidelines for treatment of the coronavirus infection	The total output of two plants: up to 300 thousand packages a week	
Renewal (PFK Obnovlenie)	Suzun, Novosibirsk Region	Putting into operation a new building. Continuous full-scale manufacturing of: valerian, motherwort, propolis, calendula, Cayenne pepper and other tinctures. In future, the manufacturer plans to gain up to 25% of the Russian tincture market	Above 2 mln tincture packs a month	1 bln roubles
Biocad CJSC	Alabushevo site, Zelenograd (SEZ Technopolis Moscow)	Launch of Phase 1 plant: product quality control and secondary packaging facilities. In a year - in the autumn of 2021 - the company plans to launch chemical and biological production facilities to manufacture 2 APIs and 40 drugs to treat cancer diseases (22 INNs)	Estimated next-year supplies: above 400 thousand packages	3 bln roubles
AMEDART LLC	Moscow, SEZ Technopolis Moscow	The company launched the production of 17 VEDs. Among the drugs that will be manufactured by the SEZ resident are drugs for HIV and renal diseases, anticoagulants, chelators and immunosuppressants. In 2021, the company will launch the production of 3 drug names to treat diabetes, and by 2024 - of another 26 drugs to treat malignant tumors	In 2021, the company will produce 100 thousand packages. When at full capacity by 2024, 1.5 million packages a year will be released	Over 700 mln roubles
Binnopharm Group	Obolensk, Moscow Oblast	Launch of an advanced small-batch production unit at the Alium plant. This will enable the company to decrease the load on its main production facilities and increase their economic efficiency. The new unit will resume the production of over 25 drug names (4 VEDs among them), used in the treatment of diseases that are not common but are socially sensitive	50-100 kg of tablets a day	

Initiator	Region	Description	Capacity	Investments
Active Component JSC	Pushkin, Leningrad Region	Launch of a new Phase One import-substituting pharmaceutical plant. The new site will allow expanding the product mix from 60 to 100 substance names, including anti-covid APIs: Azithromycin, Umifenovir and Favipiravir, anti-viral substances for HIV, antineoplastic, gastro-intestinal, neurotrophic and other substances. All in all, the project envisages 3 phases, Phase 2 will be completed in 2022 and Phase 3 - in 2024.	The new plant will expand Active Component's manufacturing capacities to 250 tons a year	2.7 bln roubles
PharmConcept LLC	Redkino, Konakovsky District, Tver Region	An intravenous antibiotic Meropenem production line. In 2021, the line is planned to be used to produce Imipinem+Cilastatin and Doripenem.	100 thousand vials per shit	100 mln roubles Total investments in the project will be worth around 830 million roubles
Pharmasyntez	Irkutsk Region	Newly opened facilities for manufacturing of APIs to treat TB, hepatitis, HIV and COVID-19. In 2021, the company will start producing substances for the manufacturing of drugs to treat cancer diseases	After Phase 2 is put into operation, the plant's output will grow two-fold to 120 tons of APIs a year. Strategic target: up to 1,000 tons of APIs a year	

Registration of those drugs was approved as per Government Decree No. 441 dated 03.04.2020. Registration implied a fast-track 20-day procedure after submission of a clinical trial report and available data on the drug's properties. Fast-track approval envisages mandatory batch quality control and registration of each use of a drug for Covid-19. The data are entered in the Uniform State Health Information System.

Russian companies develop also original drugs to treat the coronavirus infection. Microgen filed an application for the registration in Russia of COVID-globulin. The drug that is an anti-coronavirus human immunoglobulin has successfully passed through Phase I clinical trial. It will be manufactured by the National Immunobiological Company (Nacimbio). FMBA Research Centre for Biomedical Technologies is registering Leytragin, a novel drug to prevent pneumonia and severe complications of Covid-19. The drug was patented in August 2020.

Despite the high dependancy of the market in 2020 on the pandemic, Russian manufacturers continue developing and seek to offer other products in addition to anti-coronavirus ones. Below is a list of manufacturing sites that were announced or launched last year.

Several new projects emerged in 2020 regarding localization of foreign manufacturers in Russia:

- Takeda Russia started producing Ixazomib, a drug from the VED list, at the Yaroslavl plant, which became the second in the world site producing the drug in finished dosage forms. Ixazomib is the corporation's in-house development; it is released in the form of capsules and is indicated to be used in combination with Lenalidomide and Dexamethasone for patients with multiple myeloma. Total investments in the production localization are worth 590 mln roubles. The plant's manufacturing capacities fully cover the needs of Russians and EAEU countries.
- AstraZeneca announced launching on its site in the Kaluga Region full-finish production of targeted therapy drug Tagrisso (INN Osimertinib) (the drug targets cells that help cancers grow and spread) to treat lung cancer, and innovative Forxiga (INN Dapagliflozin) for adult patients with type 2 diabetes and chronic heart failure.
- MSD and Akrikhin continue their strategic partnership for the transfer of innovative drug production technologies. The companies announced localization of production of grazoprevir/elbasvir to treat chronic hepatitis C (CHC) and of doravirine/lamivudine/tenofovir to treat HIV infection. The drugs are planned to be manufactured at Akrikhin's production facilities in the Moscow Region (Staraya Kupavna). The current stage of the project on the localization of production of grazoprevir/elbasvir envisages commercial output. Several batches totalling 6 thousand packages were planned to be released by the end of 2020. Earlier in 2020, the companies signed an agreement on the localization of production of doravirine/lamivudine/tenofovir. Following the completion of the preparatory phase, the companies have passed on to the transfer of secondary packaging and release quality control technologies for subsequent production of the fixed dose combination.
- International biopharmaceutical Sobi and Russian Skopinpharm signed an agreement on phased localization on the manufacturing site in the Skopinsky District of the Ryazan Region of orphan drug Eloctate (INN Efmoroctocog alfa) for treatment of hemophilia A. Phase one envisages localization of secondary packaging and release quality control processes within the

framework of the national import substitution programme.

- Stada is going to move its production facilities from Serbia and the UK to Nizhny Novgorod (Nizhpharm), and from Ireland and Germany to Obninsk (Hemofarm). The output will near 16 million packages a year.
- Pfizer and Pharmstandard signed an agreement on contract manufacturing in Russia (at the Pharmstandard-UfaVITA plant in Bashkortostan) of 4 innovative drugs in eight dosage forms for treatment of cancer diseases: Palbociclib, Axitinib, Bosutinib and Crizotinib. The first commercial batches are expected in 2024. All of the drugs are VEDs. The partners expect to produce around 2 million tablets and capsules a year.

Another mechanism promoting, inter alia, substitution of imports is Special Investment Contract (SPIC). From the beginning of 2020, SPICs may be concluded on new terms. In the first place, it is about innovation focus. Earlier, contracts were made under an ordinary application procedure if the investor met all set criteria. Now, SPICs are concluded through competitive selection. It should be noted that it is possible to conclude SPICs with several participants at a time. Not only an investor but also the Russian Federation or its constituent entity jointly with a municipal structure may initiate the conclusion of SPICs.

The minimum project investments requirement has been lifted: investors with any amount of investments may enter into SPICs. The contract term has been increased from 10 to 15 years, and if investments exceed 50 billion roubles, to 20 years. At the same time, budget funding will be discontinued if its amount exceeds 50% of a participant's investments in the project.

Not many SPICs were signed in 2020. One project is of note. The Ministry of Industry and Trade, the Government of Saint Petersburg and Active Component JSC signed the first API production SPIC. Earlier, such contracts had been signed only with manufacturers of finished drug products. The special investment contract envisages construction of new facilities to produce pharmaceutical substances of Active Component in Pushkin (Saint Petersburg) and modernization of the existing facilities in the Metallostroy Industrial Zone to expand the API line and to reduce dependency on supplies of substances from China and India. Investments under the SPIC are worth 1.57 billion roubles.

On the other hand, NovoMedica cancelled the SPIC that was signed back in 2018. The manufacturer decided to suspend the construction of a plant in the Kaluga Region. The plant was supposed to produce Pfizer's hospital sterile injectable drugs. Due to the project suspension, the company will terminate also the special investment contract signed with the Ministry of Industry and Trade and the Kaluga Region.

2020 was the end year for the national programme on the development of the pharmaceutical and medical industry «Pharma-2020». More than 50 new manufacturing facilities were constructed and still more sites were modernized under the programme. The Russian market has become more attractive for the localization of production by foreign companies, which is evidenced by the number of such projects as well as by the amount of drugs made in the territory of Russia. Pharma-2020 Strategy proved that alongside already organized production of generics, the industry needs, in the first place, substitution of imports of innovative drugs. This target should become the industry's agenda for the next 10 years and is envisaged by Pharma-2030 Strategy. At the end of 2020, localized drugs accounted for 44% in value terms. The share of original drugs is nearly half as much: they

Table 31

Pharma-2020 Strategy implementation

Indicator	Actual, 2020 год		Target	
	Domestic	Domestic + localized	2018	2020
Share of domestic drugs in VEDs (SKU)	**56%**	**63%**	**90%**	**90%**
Share of domestic drugs in VEDs (volume, roubles)	**36%**	**48%**	**90%**	**90%**
Share of domestic drugs in total consumption in money	**34%**	**44%**	**43%**	**50%**
Share of domestically manufactured drugs by the nomenclature of the list of strategically important drugs	**58%**	**65%**	**90%**	**90%**

account for 25% only. Yet, it should be said that such a low share is, in many respects, due to the fact that so far there are few original drugs offered by Russian manufacturers accounting for only 11% in the total volume of such drugs. At the same time, the share of localized drugs rose already to 14%.

From year to year, the share of domestic drugs is steadily increasing, this is a general trend on the market. Localization and import substitution are among the drivers boosting consumption of drugs manufactured in Russia.

In 2020, this process stalled. The reason for that was the increased funding of national programmes: on account of the national programme on cancer and allocation of additional funds for high-cost nosologies, most of the drugs used in this respect are still foreign ones. At the end of the year, imported drugs accounted for 56.3% in money, and for 31.4% in packages. Localized drugs had a share of 43.7% in value terms, and 68.6% in volume terms.

85% of drug manufacturers in Russia are foreign companies. There are three Russian manufacturers in the top 20: OTCpharm, Biocad and Pharmstandard.

The rating of 2020 is characterized by numerous shifts. But the rated companies are the same. Only 5 companies retained their positions compared to 2019. In 2020, the top 20 manufacturers held in aggregate a 46.8% share.

The top three of 2020 remained the same as in 2019. Sanofi ranks first, being 0.5% ahead. The share of sales in the retail segment remains prevailing for the company (around 54% of turnovers are pharmacy sales). The second best is Novartis Corporation with a 3.9% share. Also Novartis' share is high owing to pharmacy sales (69%). The third, as before, is Bayer, being very close to the second position. Public procurement accounts only for 23% of the manufacturer's sales.

7 manufacturers out of the top 20 are notably represented in the public procurement (over 50%). Biocad, holding a 97% share, is concentrated mainly on the state segment. 91% of F.Hoffmann-La Roche's products are sold on the public procurement market, that is why the manufacturer is among those in the top 20 that demonstrated the highest growth rates.

Also Russian OTCpharm showed high dynamics: +39%, and moved 5 position lines up to rank 6th. Such dynamics was owing to a noticeable increase in sales of Arbidol that was put on the list of drugs recommended for treatment of the coronavirus infection.

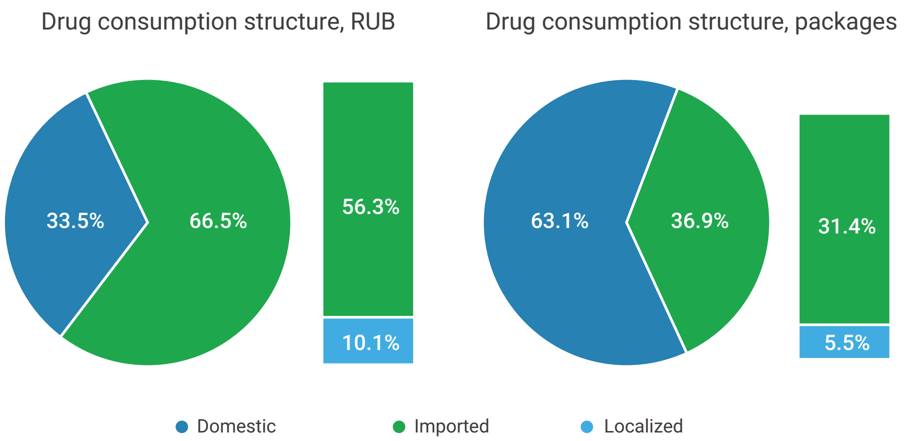


Figure 46

Consumption structure by origin, 2020

Table 32

Top 20 manufacturers by sales volumes on the Russian pharmaceutical market in 2020

2020 rating	Change	Manufacturer	Value, mln roubles 2020	Value growth	Share
1	-	Sanofi	**76,744.8**	**4.8%**	**4.4%**
2	-	Novartis	**68,103.2**	**18.1%**	**3.9%**
3	-	Bayer	**66,941.2**	**21.7%**	**3.8%**
4	+1	Johnson & Johnson	**47,888.2**	**2.3%**	**2.7%**
5	-1	Glaxosmithkline	**46,551.2**	**-2.0%**	**2.6%**
6	+5	OTCpharm	**45,422.6**	**38.7%**	**2.6%**
7	+1	Merck	**43,537.8**	**14.1%**	**2.5%**
8	-2	Stada	**42,987.9**	**3.2%**	**2.4%**
9	-2	Pfizer	**40,420.6**	**1.1%**	**2.3%**
10	-1	Teva	**37,616.1**	**6.2%**	**2.1%**
11	-1	Servier	**35,435.0**	**1.6%**	**2.0%**
12	+2	Astrazeneca	**34,091.7**	**13.8%**	**1.9%**
13	-1	Biocad	**34,053.9**	**8.5%**	**1.9%**
14	+5	F.Hoffmann-La Roche	**33,034.5**	**33.6%**	**1.9%**
15	-2	KRKA	**32,880.5**	**5.9%**	**1.9%**
16	-1	Berlin-Chemie	**31,224.4**	**10.9%**	**1.8%**
17	-1	Pharmstandard	**29,143.3**	**5.0%**	**1.7%**
18	-	Abbott	**28,443.0**	**4.8%**	**1.6%**
19	-2	Gedeon Richter	**25,676.5**	**-5.5%**	**1.5%**
20	-	Astellas Pharma	**24,598.1**	**2.2%**	**1.4%**