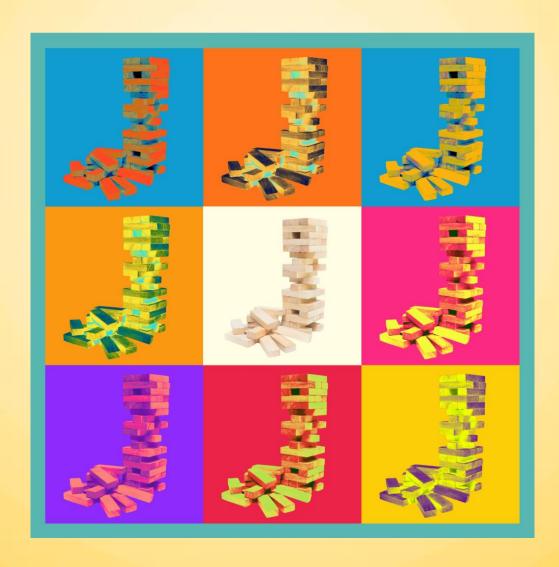


Coverage expansion: risks and opportunities

The findings of the ARV drugs procurement monitoring in 2017



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Mentioning any international non-proprietary or trade names of the medicines shall not mean that the Treatment Preparedness Coalition prioritizes them, or, on the contrary, does not recommend them.

Mentioning any treatment regimens in this report may under no circumstances be used as an alternative to a medical specialist's advice.

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THE LIST OF THE MOST FREQUENT ABBREVIATIONS

ARV, ARVT antiretroviral drugs

HIV human immunodeficiency virus

WHO World Health Organization

IPIS integrated procurement information system

EM essential medicines
II integrase inhibitors

INN taxpayer's identification number

PI protease inhibitors

RF MoH Ministry of Healthcare of the Russiam Federation

INPN international non-proprietary name

NRTI nucleoside reverse transcriptase inhibitors

NtRTI nucleotide reverse transcriptase inhibitors

IMP initial maximum price

NNRTI non-nucleoside reverse transcriptase inhibitors

CL compulsory license

TN trade name

POA public online auctyon
RF Russian Federation

AIDS acquired immune deficiency syndrome

FAS Federal Antimonopoly Service of the Russian Federation

FL federal law

LPV/r lopinavir/ritonavir

EFV efavirenz
ATV atazanavir
NPV nevirapine
DRV darunavir
ETV etravirine
RAL raltegravir

ARV DRUGS PROCUREMENT IN THE RUSSIAN FEDERATION

During recent five years, the system of the public procurement of HIV medicines has changed several times.

Until 2013, the medicines had been purchased by the Ministry of Healthcare of the Russian Federation which had distributed them in the regions. In 2013, as a result of decentralization, the function of the HIV infection and viral hepatitis B and C medicines procurement was assigned to the constituent entities of the Russian Federation. From 2014 until 2016, the medicines had been purchased by the RF constituent entities at the expense of the inter-budget transfers allocated from the federal budget. Some regions allocated additional funds for the purchase of ARV drugs from their budgets.

In 2017, the HIV infection medicines public procurement system changed again: centralization of the procurement was introduced, and so the ARV drugs purchase functions were again assigned to the Ministry of Healthcare of the Russian Federation. The main objective of the centralization was to save budgetary funds through increasing the procurement volumes, and, as a consequence, increasing the coverage with ARV therapy.

Procurements in the regions were carried out by the authorized regional customers only for their respective regions in accordance with the needs for ARVs and their own schedules, independently choosing the way to select the supplier (contractor, executor).

THE LIST OF THE ESSENTIAL MEDICINES

Only those medicines included into the EM list can be purchased at the expense of the federal budget. The list is updated annually by the Ministry of Healthcare of the Russian Federation and approved by the Government of the Russian Federation.

November 15, 2016, the RF MoH Commission on the revision of the lists of medicines considered a dossier for inclusion into the List of Essential Medicines of several HIV infection medicines, namely: emtricitabine, tenofovir/emtricitabine, dolutegravir, maraviroc, and raltegravir in the form of chewable tablets (pediatric dosage form). None of the above medicines was included into the EM list for 2017. In 2017, the new edition of the list included dolutegravir, maraviroc, and raltegravir in the form of chewable tablets.

TABLE 1. THE LIST OF THE ESSENTIAL MEDICINES

No	INPN	No	INPN	No	INPN
1.	abacavir	9.	lamivudine	17.	saquinavir
2.	atazanavir	10.	lamivudine /zidovudine	18.	stavudine
3.	abacavir/lamivudine	11.	lopinavir/ritonavir	19.	tenofovir
4.	abacavir/lamivudine / zidovudine	12.	maraviroc (included in 2017)	20.	fosamprenavir
5.	darunavir	13.	nevirapine	21.	phosphazide
6.	didanozine	14.	raltegravir (pediatric form was included in 2017)	22.	enfuvirtide
7.	dolutegravir (included in 2017)	15.	emtricitabine/rilpivirine/ tenofovir	23.	etravirin
8.	zidovudine	16.	ritonavir	24.	efavirenz

THE SCOPE AND STRUCTURE OF ARV DRUGS PROCUREMENT IN THE RUSSIAN FEDERATION IN 2017

The total amount of all procurements in 2017 reached 420,659,781,40 USD, of them:

- 365,718,174.18 USD is the total amount of the RF MoH spendings as a result of the centralized procurements
- 54,941,607.21 USD is the total amount of the procurement at the regional level.

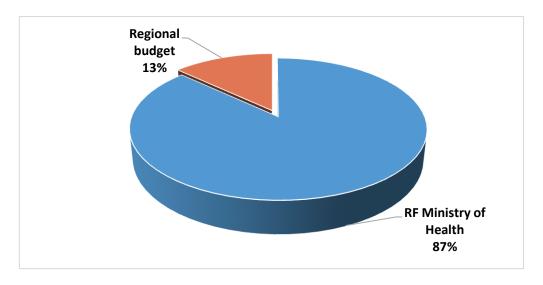


FIGURE 1. ALLOCATION OF THE BUDGET FUNDS FOR ARVS PROCUREMENT IN 2017 BY THE TYPE OF PROCUREMENT

According to the monitoring data, the total number of the treatment courses purchased in 2017 was approximately 360,000. The total number of the treatment courses purchased by the RF MoH in 2017 within the centralized procurement amounted to 332,809 courses (after the first procurement stage, the RF MoH purchased 230,482 treatment courses with 296.7 million USD and 102,327 annual courses at the expense of additionally allocated funds). In 2016, throughout the year, 227,000 courses were purchased with 382,907,327 USD. So, the number of the patients on ARV therapy just thanks to the centralized procurement increased almost 1.5 times.

1. The structure of the ARVs procurement in 2017 by the money spent:

In 2017, most budget portion (68.7%) for ARV drugs was spent on the purchase of five medicines:

- Lopinavir/ritonavir tablets 200/50 mg, 100/25 mg, solution for oral administration 60 ml 97,376,718.15 USD (23.15%);
- Darunavir tablets 400, 600, 800 mg 51,301,075.88 USD (12.20%);
- Raltegravir tablets 400 mg, chewable tablets 25, 100 mg 50,995,833.40 USD (12.21%);
- Atazanavir capsules 150, 200, 300 mg 44,716,328.99 USD (10.63%);
- Etravirine tablets 200 mg 44,685,609.43 USD (10.62%).

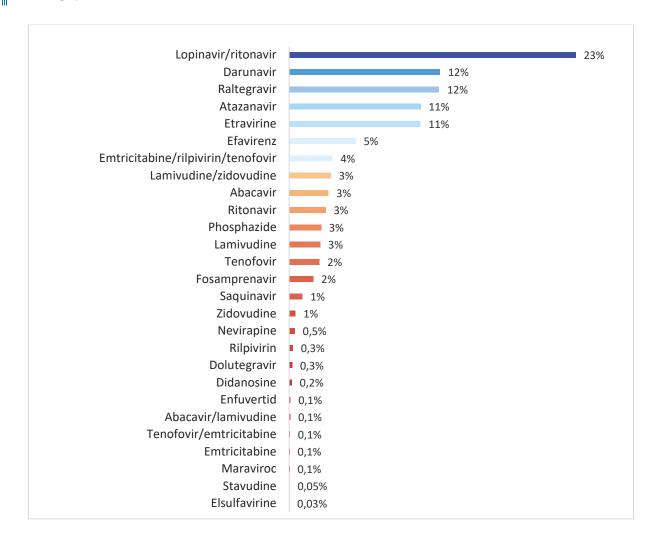


FIGURE 2. ARVS BUDGET ALLOCATION BY INPN, %

2. The procurement structure by the class and type of the medicine

According to the international and Russian recommendations, the antiretroviral therapy regimens shall consist of three medicines: two nucleoside/nucleotide reverse transcriptase inhibitors (NRTI) class medicines and a third medicine belonging to the class of non-nucleoside reverse transcriptase inhibitors (NNRTI), protease inhibitors (PI), integrase inhibitors (II), and CCR5 inhibitors. As a rule, two NRTI medicines shall include lamivudine or emtricitabine. This rule may not apply to the so-called third-line or reserve regimens, which shall be selected on an individual basis.

Based on this principle, the authors of the report have divided the further analysis into two parts: 1) NRTI group medicines, 2) the "third" medicines, including NNRTI, PI, II, as well as CCR5 and fusion inhibitors.

NRTI medicines

Taking into account that in accordance with the international and Russian guidelines, virtually in all cases NRTI combinations shall include lamivudine or emtricitabine, in order to calculate the share of the most popular NRTI, we did not take into account lamivudine and emtricitabine as separate medicines. The number of the combination medicines courses containing lamivudine or emtricitabine was added to the respective second-line medicines. The findings are shown in the diagram below.

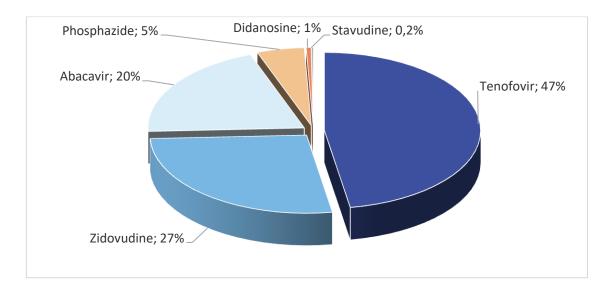


FIGURE 3. THE SHARES OF THE MEDICINES IN THE NRTI GROUP PER NUMBER OF THE ANNUAL COURSES EXCLUDING LAMIVUDINE AND EMTRICITABINE AS SEPARATE MEDICINES, AND EXCLUDING PEDIATRIC DOSAGE FORMS¹

Compared to 2016, the share of zidovudine decreased by 16%, abacavir — by 4%, didanosine — up to 1%, and procurement of stavudine almost halted (3% in 2016 and less than 1% in 2017) with significant increase in the share of tenofovir.

TABLE 2. COMPARISON OF THE NRTI SHARE BY YEARS (2016-2017) AND BY THE PATIENTS NUMBER

INPN	The estimated No of the medicine receiving patients, 2016	Share in NRTI group, 2016	The estimated No of the medicine receiving patients, 2017	Share in NRTI group, 2017
Tenofovir	48,537	21%	171,940	47%
Zidovudine	99,755	43%	97,830	27%
Abacavir	55,174	24%	73,013	20%
Phosphazide	11,751	5%	17,765	5%
Didanosine	8,665	4%	1,849	1%
Stavudine	6,884	3%	637	0,2%

The share of tenofovir increased from 21% last year to 47% in 2017 due to a significant reduction in the price for this medicine in mid-2016. Furthermore, tenofovir is currently the most purchased medicine among NRTIs (excluding lamivudine and emtricitabine). In general, from 2015 to 2017, the share of tenofovir increased from 2% to 47%, i.e. while in 2015 this medicine was practically unaffordable to the patients, then, after the medicine inclusion into the EM list and the price reduction, **tenofovir has become the basis of HIV treatment regimens in the RF**. Since tenofovir/emtricitabine is virtually unavailable, and tenofovir/emtricitabine/efavirenz were not purchased at all, the increase in the medicines availability occurred **only thanks to tenofovir as a separate medicine**.

"Third-line" medicines

Based on the number of the patients who could potentially receive 365 days therapy, the most popular medicines were as follows:

• Efavirenz 100, 200, 400, 600 mg – 161,352 courses

¹ The share of abacavir includes abacavir/lamivudine, zidovudine — lamivudine/zidovudine, tenofovir — tenofovir/emtricitabine

- Lopinavir/ritonavir 200 + 50 mg 94,088 courses
- Atazanavir 150, 200, 300 mg 36,083 courses
- Nevirapine 200 mg 21,392 courses
- Darunavir 400, 600, 800 mg 14,828 courses

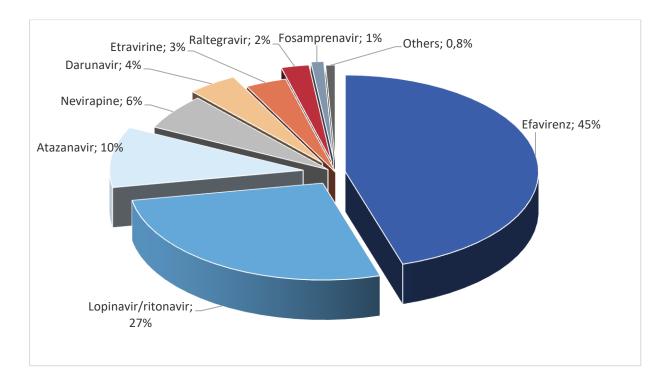


FIGURE 4. THE STRUCTURE OF THE "THIRD-LINE" MEDICINES PROCUREMENT BY THE PATIENTS NUMBER

Compared with 2016, the share of efavirenz from the total number of the patients increased by 3.5%, the share of lopinavir/ritonavir decreased by almost 2%, while the share of the patients receiving the other medicines remained virtually the same as last year.

TABLE 3. CHANGE IN THE SHARE OF THE "THIRD-LINE" MEDICINES VS. 2016

INPN	The estimated No of the medicine receiving patients, 2016	The estimated The share by the patients No, 2016 Ro, 2017 The estimated No of the medicine receiving patients, 2017		The share by the patients No, 2017
Efavirenz	93,702	41.67%	161,352	45.24%
Lopinavir/ritonavir	66,385	28.97%	96,117	26.94%
Atazanavir	23,514	10.46%	36,083	10.11%
Nevirapine	11,965	5.32%	21,392	6.00%
Darunavir	8,746	3.89%	14,828	4.11%
Etravirine	7,510	3.34%	12,260	3.44%
Raltegravir	5,932	2.64%	8,271	2.32%
Others	7,106	3.71%	6,601	1.85%

The table shows that the main increase in the purchase of "third-line" medicines in absolute terms fell on efavirenz (67 thousand courses more than in 2016).

"Three-in-one" medicines

As of December 31, 2017, four medicines had been registered in the Russian Federation, representing a complete regimen in one tablet:

- Abacavir/zidovudine/lamivudine (TN "Trizivir")
- Lamivudine/zidovudine/nevirapine (TN "Zidolam-N")
- Tenofovir/emtricitabine /efavirenz (TN "Atripla")
- Emtricitabine/rilpivirin/tenofovir (TN "Eviplera")

TABLE 5. PROCUREMENTS OF COMBINATION MEDICINES IN 2015-2017

TN	No of annual courses, No of annual 2015 courses, 2016		No of annual courses, 2017	
"Trizivir"	7	0	0	
"Zidolam-N"	185	1,401	0	
"Atripla"	2	0	0	
"Eviplera"	55	789	2,676	

Compared to the previous year, in 2017 the volume of Eviplera purchase increased considerably. The other "3-in-1" medicines in 2017 were purchased neither by the RF MoH, nor by the regions. The purchase of the "3-in-1" medicine (TN "Eviplera") cost 3.5% of the budget, and the number of the patients who could receive this medicine was only 0.74% of the total number of the treatment courses purchased.

Compared with the previous year, the number of the annual courses of "3-in-1" medicines has slightly increased by more than 20% due to increased volumes of purchases of emtricitabine/tenofovir/rilpivirine.

-

 $^{^{\}rm 2}$ In 2015 the medicine was registered in the RF

1. The analysis of the prices for the medicines within various classes

1.1. Nucleoside/nucleotide reverse transcriptase inhibitors (NRTI)

When comparing the prices of the purchases performed by the RF MoH³ in 2017 and weighted average prices for 2016, we can state a **significant reduction in prices** for a number of medicines, which evidences the efficiency of centralization as a mechanism aimed to reduce the prices. On the average, the decrease in NRTI medicines compared with 2016 was about 40%.

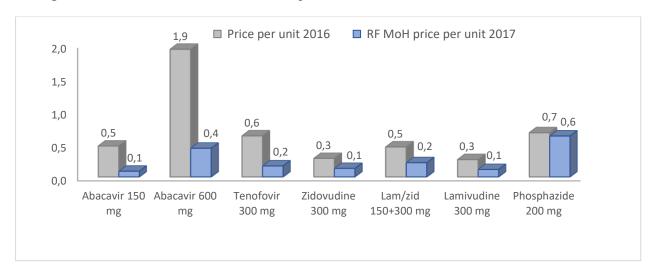


DIAGRAM 5. WEIGHTED AVERAGE PRICES PER UNIT FOR DRUGS FROM THE NRTI CLASS IN 2016-2017, USD

➤ 1.2. Non-nucleoside reverse transcriptase inhibitors (NNRTI)

When comparing the prices for NNRTI under the centralized procurement performed by the RF MoH in 2017 and the weighted average prices for 2016, it becomes evident that the prices for a number of medicines have declined. The greatest price reduction affected efavirenz 200 mg (-43%), and the lowest reduction — efavirenz 600 mg and etravirine 200 mg (-12%).

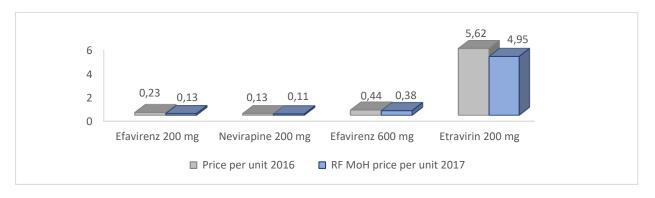


DIAGRAM 6. WEIGHTED AVERAGE PRICES PER UNIT FOR DRUGS FROM THE NNRTI CLASS IN 2016-2017, USD

➤ 1.3. Protease inhibitors (PI)

In 2017, as a result of the centralized procurement performed by the RF MoH, the price for one of the most demanded medicine in Russia — lopinavir/ritonavir (TN Kaletra) has decreased. The reduction in the most common dosage form of 200/50 mg was more than 36%, and the price per package in 2017 was 79.23 USD compared to 125.38 USD in the previous year and before. The price reduction for the pediatric dosage form of lopinavir/ritonavir was negligible (-2%).

 $^{^{\}rm 3}$ The RF MoH performed several tenders for some medicines

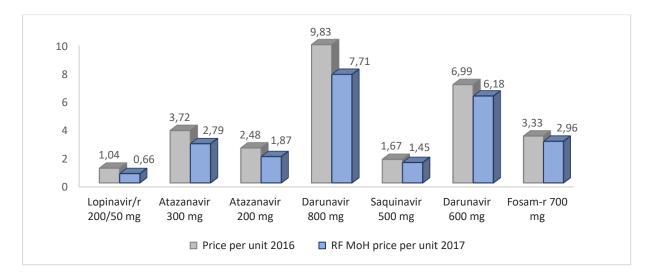


DIAGRAM 7. WEIGHTED AVERAGE PRICES PER UNIR FOR DRUGS FROM THE PI CLASS IN 2016-2017, USD

In 2017, the share of lopinavir/ritonavir in various dosage forms occupied 23% of the total budget allocated for ARV drugs (96 million USD), and in 2016 — more than 27% (more than 102.9 million USD.)

In 2017, the first generic lopinavir/ritonavir was registered with a dosage form of 200+50 mg and 100+25 mg under Kalidavir trade name (Pharmasintez, JSC). At the time of writing, this medicine was virtually unavailable on the market. According to the public sources⁴, the combination of lopinavir and ritonavir is under patent protection, which in fact should block the generics entering the market.

1.4. Integrase inhibitors (II)

This class is represented by two medicines: dolutegravir and raltegravir. In 2017, the price for raltegravir both purchased by the RF MoH and by the regions slightly decreased by less than 10% compared to 2016. The RF constituent entities in 2017 purchased the medicine on the average at the prices slightly lower than the RF MoH. The price of raltegravir in 2017 under the centralized procurement performed by the MoH was the same as the price in 2016 under the purchase of raltegravir by the RF MoH for the federal agencies (Federal Penitentiary Service, Federal Medical and Biological Agency, etc.), although the volume of purchases in 2017 increased almost eight-fold. Dolutegravir was purchased only by the regions. During two years, its price has reduced just slightly (-4%).

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⁴ Medspal.org

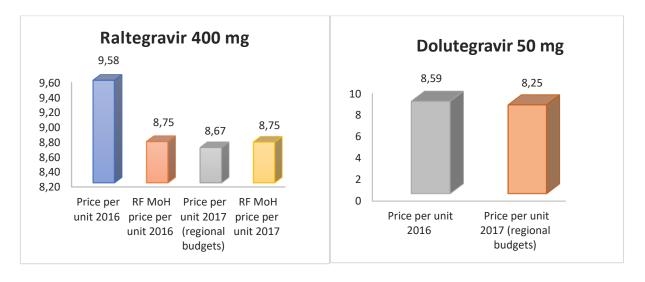


DIAGRAM 8. COMPARISON OF PRICES FOR RALTEGRAVIR 400 MG AND DOLUTEGRAVIR 50 MG IN 2016 AND 2017 AS WELL AS BY THE BUDGET TYPES

Comparison of the prices for ARV drugs in 2015-2017 is provided in <u>Annex 1</u>.

The prices for ARVs per package and the cost of the annual course in USD is provided in Annex 2.

THE NUMBER OF THE PATIENTS WHO RECEIVE ARV THERAPY

The analysis of the ARV drugs procurement structure in Russia in 2017 suggests that the **purchased amount of the medicines is sufficient for approximately 360 thousand patients**. This figure **does not** include the patients taking pediatric dosage forms (because of the impossibility to accurately calculate the number of regimens):

About 7% of the patients (slightly more than 26 thousand of the total number of the purchased courses) are provided with the treatment at the expense of the regional budgets.

Based on the findings of the analysis, it becomes evident that the increase in the number of the patients receiving treatment in 2017 was mainly due to the expansion of the use of the following regimens:

- tenofovir + lamivudine + efavirenz
- lamivudine + abacavir + efavirenz
- lamivudine/zidovudine + efavirenz

1. Treatment coverage dynamics in 2017

Over the last three years (2015-2017), the volume of the medicines purchased annually increases by more than half, resulting in a growing coverage of the patients with treatment. So, the estimated number of the patients in 2017 increased by almost 60% compared with 2016. For two years (2016-2017), the estimated number of the patients receiving therapy more than doubled (+125%).

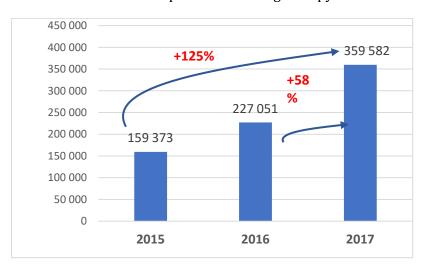


FIGURE 9. THE ESTIMATED NUMBER OF ANNUAL TREATMENT COURSES IN STATE PROCUREMENTS IN 2015-2017

THE COST OF THE MOST COMMON TREATMENT REGIMENS

Pursuant to the Russian recommendations on the treatment of HIV infection in 2017 and the analysis of purchases, the most frequently administered first-line regimens were the following:

- tenofovir + lamivudine + efavirenz
- zidovudine/lamivudine + efavirenz
- abacavir + lamivudine + efavirenz
- zidovudine/lamivudine + nevirapine

The most commonly used second-line regimens in compliance with the recommendations of the RF MoH were the regimens containing lopinavir/ritonavir, atazanavir and atazanavir + ritonavir, darunavir + ritonavir.

The cost of the annual treatment course was calculated based on the price of the maximum dosage form of an individual INPN, for example, efavirenz 600 mg, tenofovir 300 mg, lamivudine 300 mg, etc.

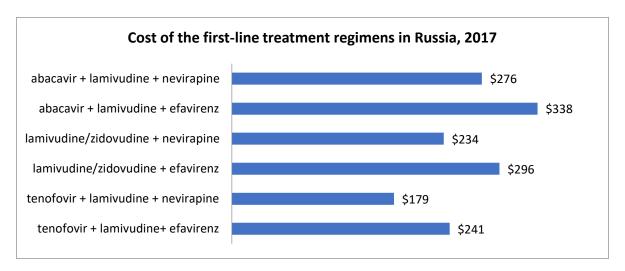


FIGURE 10. THE COST OF ANNUAL TREATMENT COURSE OF THE FIRST-LINE REGIMENS IN USD



FIGURE 11. THE COST OF ANNUAL TREATMENT COURSE OF THE SECOND-LINE REGIMENS IN USD

As can be seen in the diagrams, the cost of the first-line regimens differs almost twofold, and the cost of the second-line regimens — more than three-fold. Furthermore, the cost of certain regimens has decreased significantly compared to 2016; for example, the treatment regimens that include lopinavir/ritonavir have fallen in price by about 40%.

It's worth noting that more than 75% of the patients take some regimen in the form of monocomponents; only 24% of the patients have in their regimen "2-in-1" combination medicines, and less than 1% take regimens with "3-in-1" combination medicines.

The number of the patients taking combinatoin regimens in 2017 was about 25%, 24% of which was achieved through a combination of lamivudine/zidovudine.

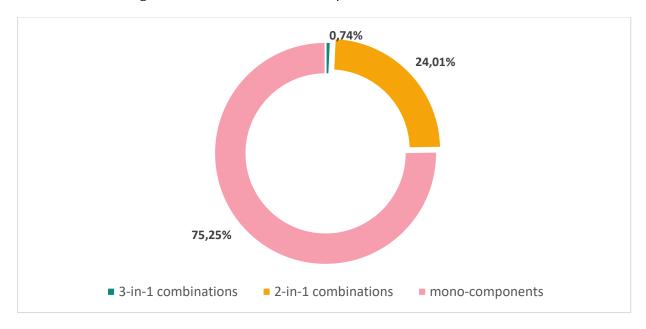


FIGURE 129. THE SHARE OF THE PATIENTS TAKING THE REGIMENS WITH COMBINATIONS AND MONO-COMPONENTS, 2017

- 1. The total number of the treatment courses purchased in 2017, according to the monitoring data, was approximately 360,000. In 2016, 227,000 courses were purchased for the whole year worth 382,907,327 USD. So, the number of the patients receiving ARV therapy just due to the centralized procurement increased almost 1.5 times.
- 2. In 2017, the major portion of the budget (68.7%) allocated for ARV drugs was spent on the purchase of the following five medicines:

Lopinavir/ritonavir, tablets 200/50 mg, 100/25 mg, solution for oral administration 60 ml – 97,376,718.15 USD (23.34%);

Darunavir, tablets 400, 600, 800 mg - 51,301,075.88 USD (12.20%);

Raltegravir, tablets 400 mg, chewable tablets 25, 100 mg – 50,995,833.4 USD (12.21%); **Atazanavir, capsules 150, 200, 300 mg** – 44,716,328.99 USD (10.63%);

Etravirine, tablets 100, 200 mg - 44,685,609.43 USD (10.62%).

- 3. The number of the patients who could receive combination medicine "one tablet once a day" is less than 1% of the total estimated number of the patients.
- 4. The main reason for the combination dosage forms dividing was still the lower price of individual medicines. This situation occurred because of the position of the Federal Antimonopoly Service of the Russian Federation. The letter of the RF FAS dated August 24, 2010 clarified that in the public procurement of medicines, combination medicines and mono-components in the same combination (in the form of a set of 2 or 3 tablets) are interchangeable.
- 5. The procurement included an insignificant quantity of a reduced dose of efavirenz 400 mg, which is recommended by WHO as a medicine with lower toxicity and improved tolerability compared to efavirenz 600 Mr^5 , which, however, is not inferior to the latter in terms of efficacy. It's worth noting that the Russian recommendations also allow to use this dosage in the treatment regimens.
- 6. Stavudine and didanosine have virtually ceased to be purchased, as the treatment programs have recommended to cease or restrict their administration. The estimated number of the patients who could receive therapy with these medicines is less than 1%.
- 7. In 2017, due to introducing centralized procurement by the RF MoH, the weighted average price of the majority of ARVs has significantly decreased compared to 2016, when procurements were performed decentrally and separately in each region. This prices reduction allowed within almost the same budget to increase the number of the medicines purchased nearly twofold. Reducing prices and increasing coverage was one of the objectives of the ARV drugs procurement centralization, which allows to reduce the prices through wholesale purchases. The largest prices reduction in the procurement performed by the RF MoH in comparison with 2016 affected the following medicines:

Abacavir tablets 150 mg (-82%) Abacavir tablets 600 mg (-78%)

Tenofovir tablets 300 mg (-73%)

- 8. The most commonly used second-line regimens, complying with the recommendations of the RF MoH, were the regimens containing lopinavir/ritonavir, atazanavir and atazanavir + ritonavir, darunavir + ritonavir. The weighted average cost of the tenofovir + lamivudine + lopinavir/ritonavir regimen is about 1,063 USD per patient per year.
- 9. The analysis of the purchases in the constituent entities of the Russian Federation has demonstrated a significant difference in prices for the same medicines. Despite significant difference, a general tendency to lower prices is evident here. Compared to 2016, the weighted average cost has decreased even for some medicines which have no generics.

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 $^{^{5}\;\}underline{\text{http://apps.who.int/iris/bitstream/10665/208825/1/9789241549684~eng.pdf?ua=1}}$

Probably, the reason was the general prices reduction at major tenders held by the RF MoH. When comparing the minimum and maximum prices in the regional procurements, the greatest difference was noted in the procurement of the following medicines:

Tenofovir, tablets 300 mg (76 times) Lamivudine, tablets 150 mg (23 times) Nevirapine, tablets 200 mg (19 times)

10. According to the Russian recommendations for HIV infection treatment made in 2017 and the procurements analysis, the most commonly administered first-line regimens were the following:

tenofovir + lamivudine + efavirenz (weighted average cost of 240 USD per year per person) zidovudine/lamivudine + efavirenz abacavir + lamivudine + efavirenz zidovudine/lamivudine + nevirapine

11. In total, two applications for participation in 11 tenders held by the RF MoH were filed; in the other 59 tenders, the contracts were entered into with a single bidder. So, **84% of the tenders were held by the RF MoH without any competition**.

Recommendations:

- 1. The Government of the Russian Federation, including the Ministry of Healthcare and the Ministry of Finance should consider the possibility of allocating additional funds for the procurement of antiretroviral therapy medicines at the federal level. This is required to achieve the targets for antiretroviral therapy coverage in accordance with the National Strategy.
- 2. The Ministry of Healthcare and the Federal Antimonopoly Service should with the assistance of an interdepartmental commission negotiate with producers of the medicines under patent protection further prices reduction. First and foremost, these include such medicines as raltegravir, etravirine, dolutegravir, lopinavir/ritonavir, rilpivirin, rilpivirin/tenofovir/emtricitabine, and tenofovir/emtricitabine. If the negotiations fail, they should consider applying the compulsory licensing mechanism with the assistance of respective agencies of the Russian Federation Government.
- 3. The Ministry of Healthcare of the Russian Federation should develop a plan for optimization of the treatment regimens in the Russian Federation, taking into account the latest recommendations of the World Health Organization and the European AIDS Clinical Society. It is recommended to gradually reduce the proportion of the medicines not included into the priority treatment regimens through increasing the proportion of the medicines recommended as the priority medicines. In particular, taking into account the recent trends reflected in these documents, it is recommended to gradually reduce the proportion of such medicines as zidovudine, lopinavir/ritonavir, and efavirenz 600 mg through expanding such options as dolutegravir, darunavir, atazanavir, rilpivirine, and raltegravir, subject to respective prices reduction (please refer to Recommendation 1.)
- 4. The Ministry of Healthcare, the Federal AIDS Control Center, and the Chief External Expert of the Ministry of Healthcare of the Russian Federation on HIV infection should analyze the use of reduced dosage of efavirenz (400 mg) in clinical practice and based on this analysis provide their recommendations on its use.
- 5. <u>The Federal AIDS Control Center</u> should monitor the efficacy and safety of Elpida innovative medicine (elsulfavirine).
- 6. The Government of the Russian Federation should consider the possibility of making amendments to the legal framework in order to accelerate the registration of innovative medicines in the Russian Federation, in particular, to allow not to conduct clinical trials in the Russian Federation of the medicines already registered in the countries with strict regulatory agencies.
- 7. The Ministry of Healthcare of the Russian Federation should provide for the preparation of the applications within the timelines allowing to hold the tenders for the purchase of the medicines in or before February, 2019, in order to avoid an interruption in the supply. Also, it should consider the possibility of carrying out the procurements in two stages (the beginning and middle of the year) in order to reduce the risk of interruption in deliveries.
- 8. The customers in the constituent entities of the Russian Federation shall use more reasonable mechanisms for calculating the initial maximum price, taking into account the therapy deficiency and limited funds allocated from the regional budgets.
- 9. The Ministries of Healthcare of the constituent entities of the Russian Federation should continue their efforts to ensure regular allocation of additional funds for the purchase of ARV therapy at the level of the constituent entity.

RECOMMENDATIONS

- 10. The Federal Antimonopoly Service should continue improvement of the legislative framework in compulsory licensing for public healthcare needs. This tool is needed in negotiations with the ARV drugs manufacturers aimed to reduce their prices.
- 11. The Federal Antimonopoly Service should continue monitoring the procurement of antiretroviral drugs with the assistance of the public organizations in order to prevent possible abuse of monopoly position by the companies.
- 12. The Ministry of Healthcare of the Russian Federation should with the assistance of the respective commission prioritize antiretroviral drugs when considering the issue of their inclusion into the EM list because of the social significance of this disease.
- 13. The Federal Service for Supervision in Healthcare should continue cooperation with the representatives of the patients' community in terms of monitoring interruption in the medicines delivery.

ANNEX 1. COMPARISON OF THE ARV DRUGS PRICES IN 2015-2017 IN USD

	Weighted avg	Weighted avg	Weighted avg	Difference
INPN	price per unit,	price per unit,	price per unit,	2016/2017
Abacavir/zidovudine/lamivudine 300+300+150 mg	USD, 2015 4.08	USD, 2016	USD, 2017°	_
Abacavir solution 240 ml	47.68	47.65	42.30	-11%
Abacavir tablets 150 mg	0.72	0.46	0.09	-82%
Abacavir tablets 300 mg	1.20	0.48	0.25	-48%
Abacavir tablets 600 mg	2.62	1.93	0.43	-78%
Abacavir/lamivudine 600+300 mg	4.18	3.61	2.47	-32%
Atazanavir capsules 150 mg	1.88	1.87	1.40	-25%
Atazanavir capsules 200 mg	2.48	2.48	1.87	-25%
Atazanavir capsules 300 mg	3.77	3.72	2.79	-25%
Darunavir tablets 400 mg	4.87	4.69	4.12	-12%
Darunavir tablets 600 mg	7.19	6.99	6.18	-12%
Darunavir tablets 800 mg	10.71	9.83	7.71	-22%
Didanozine capsules 125 mg	1.00	0.99	0.97	-2%
Didanozine capsules 250 mg	1.18	1.14	1.11	-3%
Didanozine capsules 400 mg	1.46	1.44	1.39	-3%
Didanozine capsules 400 mg	17.77	17.15	16.94	-1%
Dolutegravir tablets 50 mg	16.08	8.59	8.25	-4%
Zidovudine capsules 100 mg	0.10	0.12	0.04	-65%
Zidovudine solution for infusion 20 ml	9.20	8.97	6.37	-29%
Zidovudine solution 200 ml	18.38	17.28	10.52	-39%
Zidovudine tablets 300 mg	0.27	0.28	0.13	-54%
Zidovudine/lamivudine/nevirapine 300+150+200 mg Lamivudine solution 240 ml	1.00 32.02	0.88 30.23	20.54	-32%
Lamivudine solution 240 mg	0.08	0.06	0.03	-45%
Lamivudine tablets 300 mg	0.32	0.26	0.11	-57%
Lamivudine /zidovudine 150+300 mg	0.44	0.45	0.21	-53%
Lopinavir/ritonavir 80+20 mg, oral solution, 60 ml	25.13	25.05	24.65	-2%
Lopinavir/ritonavir tablets 200/50 mg	1.10	1.04	0.66	-37%
Lopinavir/ritonavir tablets 100/25 mg	1.80	1.79	1.05	-41%
Maraviroc tablets 150 mg	4.01	3.63	3.56	-2%
Maraviroc tablets 300 mg	7.17	6.69	6.38	-5%
Nevirapine suspension 240 ml	13.33	13.26	12.38	-7%
Nevirapine tablets 200 mg	0.29	0.13	0.11	-20%
Raltegravir tablets 400 mg	9.68	9.58	8.75	-9%
Raltegravir chewable tablets 25 mg	-	0.69	0.66	-4%
Raltegravir chewable tablets 100 mg	-	2.61	2.54	-3%
Rilpivirine tablets 25 mg	18.13	17.70	15.86	-10%
Ritonavir capsules 100 mg	1.02	1.06	0.68	-36%
Saquinavir tablets 500 mg Stavudine capsules 30 mg	1.69 0.62	1.67 0.65	1.45 0.35	-13% -46%
Stavudine capsules 40 mg	0.90	0.90	-	-40%
Stavudine powder 260 ml	12.44	11.50	-	-
Tenofovir tablets 300 mg	4.04	0.62	0.17	-73%
Tenofovir tablets 150 mg	- 7.20	-	0.10	-
Tenofovir/emtricitabine 300+200 mg	7.29	7.55	6.59	-13%
Tipranavir capsules 250 mg	6.62	8.31	-	-
Fosamprenavir suspension 225 ml	62.95	58.47	48.71	-17%
Fosamprenavir tablets 700 mg	3.49	3.33	2.96	-11%
Phosphazide tablets 200 mg	0.67	0.67	0.62	-7%
Phosphazide tablets 400 mg	0.66	0.64	0.61	-5%
Elsulfavirine capsules 20 mg	-	-	4.95	-
Emtricitabine/rilpivirine/tenofovir 200+25+300 mg	30.85	15.86	15.08	-5%
Emtricitabine tablets 200 mg	-	1.79	1.38	-23%
Enfuvirtide lyophilisate 90 mg/ml	19.00	19.29	18.40	-5%
Etravirin tablets 100 mg Etravirin tablets 200 mg	2.87 5.67	3.21 5.62	- 4.95	-12%
Efavirenz tablets 100 mg	0.08	0.08	0.06	-15%
Efavirenz tablets 200 mg	0.23	0.23	0.13	-43%
Efavirenz tablets 400 mg	-	-	0.30	
<u> </u>	0.42	0.44	0.38	120/
Efavirenz tablets 600 mg	0.42	0.44	0.30	-12%

⁶ The weighted average prices for ARV drugs is based on the prices of the RF MoH in 2017 for the medicines purchased by the Ministry within decentralized procurement, and the weighted average prices within the regional procurements for the medicines not included into the EM list or not purchased by the RF MoH in 2017.

ANNEX 2. ARV DRUGS PRICES IN USD

Medicine	Tablets per package	Price per package 2017 in USD	Cost of annual course, USD
Abacavir/lamivudine 600+300 mg	30	74.11	901.66
Abacavir solution 240 ml	1	42.30	
Abacavir tablets 150 mg	60	5.11	124.44
Abacavir tablets 300 mg	60	15.00	182.54
Abacavir tablets 600 mg	30	12.94	157.43
Atazanavir capsules 150 mg	60	84.03	1,022.35
Atazanavir capsules 200 mg	60	112.03	1,363.01
Atazanavir capsules 300 mg	30	83.61	1 017.22
Darunavir tablets 400 mg	60	247.29	3,008.71
Darunavir tablets 600 mg	60	370.62	4,509.18
Darunavir tablets 800 mg	30	231.45	2,815.97
Didanozine capsules 125 mg	30	29.13	354.37
Didanozine capsules 250 mg	30	33.40	406.39
Didanozine capsules 400 mg	30	41.80	508.55
Didanozine capsuces 400 mg Didanozine oral powder 2 g	1	16.94	300.33
Dolutegravir tablets 50 mg	30	247.49	3,011.09
Zidovudine capsules 100 mg	100	4.27	93.52
Zidovudine capsules 100 mg Zidovudine solution 200 ml	100	10.52	93.52
	5		
Zidovudine solution for infusion 20 ml		31.87	02.00
Zidovudine tablets 300 mg	60	7.64	92.90
Lamivudine /zidovudine 150+300 mg	60	12.81	155.87
Lamivudine solution 240 ml	1	20.54	
Lamivudine tablets 150 mg	60	1.96	23.79
Lamivudine tablets 300 mg	30	3.33	40.56
Lopinavir/ritonavir tablets 100/25 mg	60	63.19	1,537.66
Lopinavir/ritonavir tablets 200/50 mg	120	79.23	964.01
Lopinavir/ritonavir 80+20 mg, oral solution, 60 ml	5	123.26	
Nevirapine tablets 200 mg	60	6.43	78.25
Nevirapine suspension 240 ml	1	12.38	
Maraviroc tablets 150 mg	60	213.53	2,597.94
Maraviroc tablets 300 mg	60	382.66	4,655.66
Raltegravir tablets 400 mg	60	524.79	6,384.99
Raltegravir chewable tablets 25 mg	60	152.15	960.75
Raltegravir chewable tablets 100 mg	60	39.48	1,851.15
Ritonavir capsules 100 mg	30	61.08	247.70
Rilpivirine tablets 25 mg	30	475.93	5,790.44
Saquinavir tablets 500 mg	120	174.05	2,117.56
Stavudine capsules 30 mg	56	19.86	258.91
Tenofovir tablets 150 mg	60	5.99	72.86
Tenofovir tablets 300 mg	30	4.95	60.28
Tenofovir/emtricitabine 300+200 mg	30	197.75	2,406.02
Fosamprenavir suspension 225 ml	1	48.71	,
Fosamprenavir tablets 700 mg	60	177.54	2,160.13
Phosphazide tablets 200 mg	20	12.34	675.49
Phosphazide tablets 400 mg	60	36.69	446.45
Elsulfavirine capsules 20 mg	30	148.64	1,808.46
Emtricitabine tablets 200 mg	30	41.30	502.47
Emtricitabine tablets 200 mg Emtricitabine/rilpivirine/tenofovir 200+25+300 mg	30	452.44	5,504.74
Enfuvirtide lyophilisate 90 mg/ml	60	1,103.92	13,431.02
Etravirin tablets 200 mg	60	296.90	3,612.28
Efavirenz tablets 100 mg	30	1.94	141.60
Efavirenz tablets 200 mg	90	11.64	141.60
Efavirenz tablets 400 mg	30	8.93	108.67
Efavirenz tablets 600 mg	30	11.49	139.78

⁷ Annual average exchnage rate in 2017: 58,3086 RUB/USD https://www.kursvaliut.ru/средний-курс-валют-за-месяц-2017