

Regional characteristics of birth control in Russia in 2018-2022

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Abstract: The article presents a spatial analysis of abortion rates in Russia. The study draws on official abortion statistics, which, following methodological revisions in 2018, now include information that was not available in previous years. Regional differences are examined in terms of the incidence of induced and spontaneous abortions, the share of abortions performed in the private health sector, and the frequency of medical abortions.

Despite the overall decline in abortion rates in Russia, significant interregional disparities remain. In general, abortion rates tend to increase from west to east and from south to north. About two-thirds of Russian women of reproductive age live in regions with low and very low levels of induced abortions, while 16% live in regions with relatively high levels. Contrary to expectations, these disparities did not narrow during the study period.

We argue that comparing regions by the total number of abortions is not particularly meaningful, since the ratio of induced to spontaneous abortions among pregnancies ending in abortion varies greatly across regions. The study also reveals a shift of induced abortions toward the private healthcare sector, underscoring the issue of limited access to services within the compulsory medical insurance system. In several regions, more than half of induced abortions are performed in the non-state sector. Women increasingly seek higher-quality services and tend to prefer safer medical abortion methods, which are offered far more often in private than in public clinics.

Keywords: Russia, induced abortion, spontaneous abortion, birth control, contraception, family planning, regional differences.

Funding: This article was prepared within the framework of the Basic Research Program at the HSE University.

For citation: Sakevich V., & Denisov B. (2024). Regional characteristics of birth control in Russia In 2018-2022. Demographic Review, 11(3), 67-87. <https://doi.org/10.17323/demreview.v11i3.22715>

Introduction

The years since the collapse of the USSR have been successful in terms of reducing the role of abortion as a method of intra-family birth control. While in 1990, 4.1 million pregnancy terminations (including miscarriages) were registered in the Russian Federation, in 2022 the number was 0.5 million. The relative indicator per 1,000 women aged 15 to 49 decreased almost eightfold during this period: from 113.9 to 14.6. The decline was steady, and, unlike the dynamics of other demographic indicators, the favorable trend was never interrupted.

The abortion/birth ratio, which shows what proportion of pregnancies do not end in childbirth, has also changed for the better. In 2022, less than 1/3 of conceptions ended in termination, while in 1990 more than 2/3 did. That is, there was a convergence of the number of pregnancies and the number of births, meaning fewer reproductive losses and more effective birth control.

The current Russian abortion rate is low by global standards and differs little from the average for high-income countries, which is estimated at 15 induced abortions per 1,000 women aged 15 to 49 in 2015-2019. The corresponding rate for low-income countries is estimated to be 2.5 times higher (38 per 1,000 women aged 15-49) (Bearak et. al 2020). In some developed countries, according to national statistical agencies, the induced abortion rate is significantly higher today than in Russia. For example, in Sweden, per 1,000 women aged 15-44 it is 18.4 (2023) (Socialstyrelsen 2024), in England and Wales - 21.5 (2022) (GOV.UK 2024), and in the USA - 14.4 (2020) (Jones, Kirstein, Philbin 2022), while in Russia, according to Rosstat, it is 10.3 (2022).

However, the average Russian abortion rates conceal quite significant territorial differences, and this issue is rarely raised in the Russian scientific literature. Over the past decade, only a few works can be noted that touch on regional aspects of birth control.

V.A. Kozlov, based on official statistics for 2005, 2010 and 2014, showed an increase in the differentiation of regions in terms of the prevalence of abortions during the period under review, while at the same time the level of abortions was decreasing everywhere and abortions, in the words of the author, had become a marginal phenomenon (Kozlov 2016). Assessing the correlation of the level of abortions with the characteristics of the socio-economic development of the regions, the author comes to the conclusion that of the many socio-economic factors, only the level of education of the population (the proportion of people with higher education) influences the frequency of abortions, as well as, in 2010 and 2014, the volume of vodka sales (the more sales, the higher the abortion rate). According to V.A. Kozlov, the differences between the regions are “cultural in nature” and are less related to the socio-economic situation.

As of 2015, V. Kozlov and A. Raksha identified several regional clusters depending on the level of “voluntary abortions”, i.e. induced abortions at the request of a woman¹ (Kozlov, Raksha 2017). The group with the lowest number of voluntary abortions included the republics of the North Caucasus (except Adygea, but with Kalmykia), Moscow and St. Petersburg. Among the regions with the highest incidence of voluntary abortions in 2015 were the Jewish Autonomous Region, the Pskov, Orenburg and Magadan Regions and the Chukotka Autonomous Okrug. In several regions, the total number of abortions decreased by more than 80% between 2000 and

¹ We assume that only abortions performed in institutions of the Ministry of Health of Russia were analyzed.

2015. The authors hypothesized that as the abortion rate in Russia approaches the average for developed countries, the positive dynamics will fade.

In the article “Abortions and Abortive Behavior in the Context of the Search for Reserves for Demographic Development in Russia,” S.V. Ryazantsev and colleagues also pointed out the significant variability in regional abortion rates, relying on statistics on the total number of abortions, i.e. without distinguishing between induced and spontaneous abortions (Ryazantsev et al. 2019). The authors suggested that the factors in regional differentiation of relative abortion rates are socioeconomic conditions and the socio-psychological climate in the regions, as well as the attention of regional authorities to this problem and the varying effectiveness of preventive measures.

Using data for 2020, P.N. Anokhina and L.A. Davletshina classified Russian regions based on several reproductive health indicators, including the number of pregnancy terminations (Anokhina, Davletshina 2022). The largest of the three clusters identified by the authors, including 37 regions, is characterized by low abortion and maternal mortality rates; it is noteworthy that the total fertility rate in these regions is also low, which once again confirms the weak connection between abortions and fertility. Distinctive features of the second cluster (20 regions) are high fertility and abortion rates relative to the Russian average; the third cluster (23 regions) is characterized by high maternal and infant mortality, as well as higher fertility and abortion rates than in the first cluster. Five regions were excluded from consideration as “atypical”: the Republic of Tyva, the Chechen Republic, the Chukotka Autonomous Okrug, the Pskov and Magadan regions.

In general, all researchers note the great heterogeneity of Russian regions in terms of abortion rates, which is difficult to explain.

The purpose of this article is to analyze territorial differences in abortion rates over the past five years, from 2018 to 2022. The period was not chosen by chance. Starting in 2018, changes in statistical accounting in Russia have made it possible for the first time to consider separately induced and spontaneous abortions (miscarriages) for all organizations providing medical care for termination of pregnancy, regardless of the form of ownership. Also, since 2018, it has become possible to estimate the share of induced abortions in the non-governmental healthcare sector, which is currently the focus of attention of Russian politicians.

As for studying the causes of territorial differences, at this stage we have not set ourselves such a task. This is a separate topic that requires other data at the macro- and microlevel, which neither official statistics nor the results of sample surveys at our disposal provide. The task of establishing the causes of differences between regions seems especially difficult if we assume that the roots of these differences are of a “cultural” or “socio-psychological” nature, as many authors write.

The proximate or intermediate factors influencing the level of induced abortions in post-transition countries are the frequency of unplanned pregnancies and the willingness of women to terminate such a pregnancy if it was not possible to prevent it (Bearak et al. 2020; Guillaume, Rossier 2018; Bongaarts, Westoff 2000; Bongaarts 1978). In turn, the frequency of unplanned pregnancies, according to the classical model of intermediate determinants of fertility, is a function of the number of sexually active women who have suffered contraceptive failure or have an unmet need for contraception. Much is known about the use of contraception by Russian women (Vishnevsky, Denisov, Sakevich 2017; Dikke, Erofeeva 2014) at the country level or at the

level of a separate region, while the second factor - the willingness to terminate a pregnancy - has been studied to a much lesser extent. During sample surveys in Russian regions in the 1980-1990s, the overwhelming majority of women answered that they would have an abortion in the event of an unplanned pregnancy (Kharkova 1994; Goldberg, Bodrova 2001). At present, when the practice of abortion is becoming increasingly stigmatized, this is probably no longer the case, but we cannot test this hypothesis. The article attempts to link the level of abortions in the regions of Russia with the use of contraception, based on official statistics from the Ministry of Health of the Russian Federation, which, however, have shortcomings.

Data and methods

The article is based on materials from the Federal State Statistics Service.

Official statistics on pregnancy terminations², which are developed by Rosstat, are formed from three sources. The main source is the Ministry of Health of the Russian Federation, which takes into account terminated pregnancies in organizations under its jurisdiction. A significantly smaller contribution is made by the non-governmental health sector, but its share is growing rapidly. The share of abortions performed in organizations belonging to departments other than the Ministry of Health is insignificant (less than 1%). Rosstat summarizes data from all sources according to statistical observation form No. 1-zdrav and publishes combined data on terminated pregnancies in the country as a whole and in the constituent entities of the federation.

Since Soviet times, the accounting of pregnancy terminations in Russia has included both induced and spontaneous abortions, although they have completely different justifications and reasons. And while in the statistical reports of the Ministry of Health they could be separated, in the reports of other organizations only the total number of abortions was given. However, starting in 2018, the accounting of pregnancy terminations outside the Ministry of Health for the first time became as detailed as the accounting of the Ministry of Health, i.e. with the allocation of headings according to the ICD (Sakevich, Denisov, Nikitina 2021).

Rosstat statistics on pregnancies with abortive outcome are quite reliable, with the probable exception of some regions (Denisov, Sakevich 2014). Among the shortcomings of official statistics, it is worth mentioning the lack of division into urban and rural population, as well as the enlarged age groups. Since 2016, the five-year age grouping has been eliminated and the age distribution of women who have had an abortion is as follows: under 14, 15-17, 18-44, 45-49, 50 years and older. Now one age group (18-44) accounts for 98% of all abortions. Information on the marital status of women terminating a pregnancy is not developed.

The main indicator we relied on in our analysis was the abortion rate (all abortions, induced and spontaneous) per 1,000 women of reproductive age (15-49 years). This indicator is not optimal for interregional comparisons, since it depends on the ratio of specific age groups of women within the reproductive interval. However, another indicator frequently used in the literature - the abortion-to-birth ratio - is, in our opinion, even less suitable, since it depends on differences between regions in both the abortion and birth rates. Unfortunately, after 2015, it was not possible to calculate the most accurate measure of the abortion rate - the total abortion rate. In our calculations, we used data on the number of women recalculated after the 2020 (2021) All-Russian Population Census.

² We use "termination of pregnancy", "pregnancy with abortive outcome" and "abortion" as synonyms.

The primary source of information on contraceptive behavior are sample population surveys, which are rarely representative at the regional level. Therefore, to study such a proximate determinant of the abortion rate as the use of contraception, we used statistics from the Russian Ministry of Health, which has a number of limitations. Firstly, it covers only two methods of contraception (intrauterine and hormonal), and these are not the most popular contraceptive methods in the country. According to the results of sample surveys, the most common contraceptive method in Russia is a condom (UN Department of Economic... 2024). And secondly, the statistics of the Ministry of Health take into account women who went to a clinic subordinate to the ministry in a given year. The proportion of women using these two methods of contraception is calculated for all women of reproductive age, regardless of marital status and sexual activity. However, there are no other statistics on the use of contraception by region.

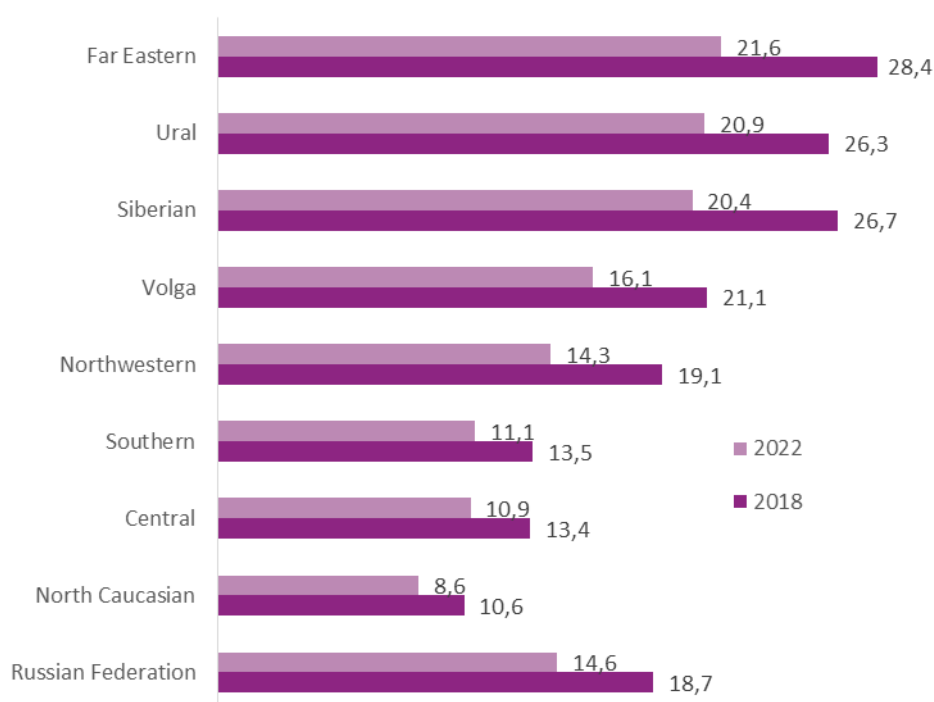
In our analysis, we used traditional methods: descriptive statistics and correlation analysis, in particular the Spearman rank correlation coefficient.

Results

Pregnancies with abortive outcome

At the level of large territorial units - federal districts (FD) - there is a tendency for the level of abortions to increase from west to east and from south to north.

Figure 1. Pregnancies with abortive outcome, per 1,000 women aged 15-49 years, Federal Districts of Russia, 2018 and 2022.



Source: Rosstat data, authors' calculations.

As other authors have already noted, the smallest number of pregnancy terminations is registered in the North Caucasus FD (Figure 1). The Central and Southern Federal Districts are also characterized by lower rates than Russia as a whole. The Northwestern and Volga Federal

Districts occupy a middle position, while the Ural, Siberian and Far Eastern Federal Districts form a group of regions with a relatively high abortion rate, 1.4-1.5 times higher than the national average. The gap between the North Caucasian and Far Eastern Federal Districts in 2022 was 2.5 times. The location of districts in the ranking series depending on the frequency of termination of pregnancy remains almost unchanged over time (Vishnevsky et al. 2015).

At the level of individual regions, the difference between the minimum and maximum indicators in 2022 (in the Kabardino-Balkarian Republic and in the Republic of Tyva) was almost 6 times. The value of the coefficient of variation, calculated on the basis of the number of pregnancies with an abortive outcome per 1,000 women of reproductive age, indicates territorial heterogeneity (Table 1).

Table 1. Territorial variation in the number of pregnancies with abortive outcome, per 1,000 women aged 15-49, 2018-2022

	2018	2019	2020	2021	2022
Russia (Rosstat)	18.7	17.7	15.8	14.9	14.6
Minimum	6.4	6.3	5.3	4.7	5.6
Maximum	37.6	37.0	31.4	31.1	32.1
Average value *	21.4	20.2	18.0	16.8	16.3
Coefficient of variation **, %	35.5	35.8	36.5	35.9	36.1

*Note: * – Unweighted arithmetic mean.*

*** – Ratio of standard deviation to arithmetic mean.*

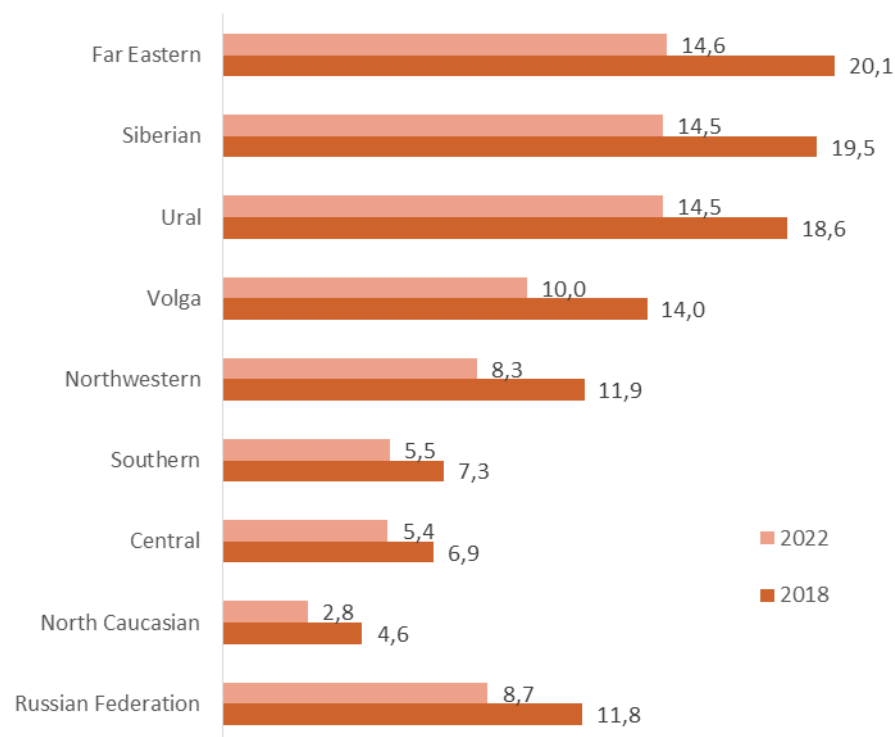
The number of induced abortions in the country has been rapidly decreasing throughout the post-Soviet period, as a result of which the ratio of induced and spontaneous abortions among pregnancies with abortive outcome has changed towards an increase in the share of the latter, and in 2022, miscarriages accounted for 40% of the total number of pregnancy terminations. The share of miscarriages among pregnancies with abortive outcome, however, varies greatly between regions (range from 21 to 98% in 2022; see Table A in the Appendix), which means that comparing regions by the level of the total number of abortions today does not make much sense: in the case of some regions, the total number of abortions contains, for example, more than 70% of miscarriages, while in the case of others, more than 70% of induced abortions.

Induced abortions

If we consider only induced abortions³ (IA), without miscarriages, the territorial heterogeneity increases even more.

The IA rate in the North Caucasus Federal District is three times lower than the national average (Figure 2), while the induced abortion rate in the Urals, Siberian and Far Eastern Federal Districts is 1.7 times higher than the Russian average. The latter three districts account for more than 40% of all induced abortions in the country, although only a quarter of Russian women of reproductive age live in them. The gap between the North Caucasus and Far Eastern Federal Districts is more than 5 times, and the rate of decline in the IA coefficient over five years in the North Caucasus Federal District was the highest among all districts.

Figure 2. Induced abortions, per 1,000 women aged 15-49, Federal Districts of Russia, 2018 and 2022



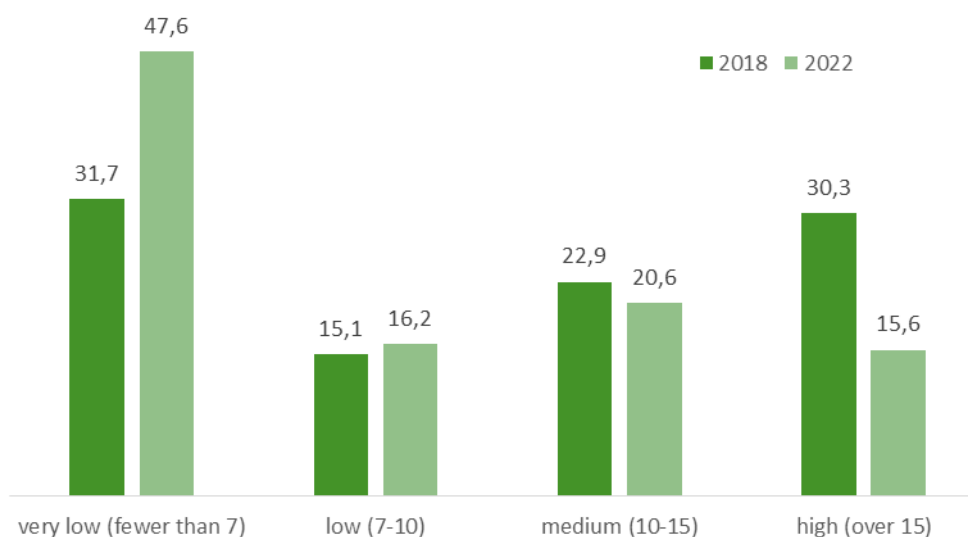
Source: Rosstat data, authors' calculations.

In the Republic of Ingushetia in 2022, only 15 induced abortions were registered, or 0.1 per 1,000 women aged 15-49 (minimum), and in the Republic of Tyva, the “leader” of 2022, it was 23.9.

³ Hereinafter the number of induced abortions is obtained by subtracting the number of spontaneous abortions (including abnormal products of conception) from the total number of abortions.

As of 2022, almost 2/3 of Russian women lived in regions with very low and low levels of induced abortions (respectively, less than 7 and 7-10 per 1,000 women aged 15-49)⁴ (Figure 3). However, in some regions, located mainly in the north and east of the country, the IA rate is approximately twice the Russian average: more than 15 per 1,000 women aged 15-49, including more than 20 per 1,000 in three regions; 5.4 million (or about 16%) Russian women of reproductive age live in these regions. However, on a global scale, the last group of regions would not be among the leaders in abortion rates; the global average IA rate in 2015-2019 is estimated at 39 per 1,000 women aged 15-49, and the rate for the West Asia and North Africa region is 53 per 1,000 (maximum) (Bearak et al. 2020). The situation has improved compared to 2018, when 30% (or about 11 million) of Russian women lived in regions with a relatively high IA rate.

Figure 3. The share of women of reproductive age living in groups of regions depending on the level of induced abortions (per 1,000 women aged 15-49 years), 2018 and 2022, %



Source: Rosstat data, authors' calculations.

Table 2. Territorial variation in the rate of induced abortions, per 1,000 women aged 15-49, 2018-2022

	2018	2019	2020	2021	2022
Russia (Rosstat)	11.8	11.1	9.7	9.0	8.7
Minimum	4.3	4.3	4.1	3.8	3.9
Maximum	30.4	30.0	23.6	22.1	23.9
Average value*	15.1	14.2	12.3	11.3	10.9
Coefficient of variation**, %	41.6	42.2	42.5	42.0	43.5

Note: *Unweighted arithmetic mean. **Ratio of standard deviation to arithmetic mean.

Regions with an extremely low absolute or relative number of abortions were excluded: Republic of Ingushetia, Chechen Republic, Kabardino-Balkarian Republic, Republic of Dagestan, Republic of Kalmykia, Nenets Autonomous Okrug, Moscow.

⁴ In determining the low abortion rate, we looked at countries with the lowest abortion rates in Europe, such as Switzerland (5.8 per 1,000 women aged 15-49 in 2022), Germany (5.9 per 1,000 in 2020), and the Czech Republic (7.0 per 1,000 in 2022).

The coefficient of variation calculated based on the number of induced abortions per 1,000 women of reproductive age exceeds 40%, which confirms the large territorial heterogeneity (Table 2). In terms of fertility, Russia is more homogeneous than in terms of the level of induced abortions (Zakharov 2014; Rodina 2023). It is worth mentioning that in a number of regions, either the absolute or relative number of registered induced abortions is so small that these regions were excluded from the calculations of variation indicators. But even without these regions, the spread of the induced abortion level is large, and regional dispersion does not decrease over time; on the contrary, in 2022, it was the highest for the period under review.

In addition to the republics of the North Caucasus, where very few induced abortions have always been registered, the Belgorod, Moscow and Rostov regions, St. Petersburg and Krasnodar Krai have been characterized by consistently low rates over the past five years. A very low IA coefficient is also recorded in Moscow, but in this case there are doubts about the quality of recording of both abortions and the number of women. The Republics of Tyva, Sakha (Yakutia) and Altai, the Sverdlovsk, Pskov, Sakhalin, Kurgan regions and the Jewish Autonomous Region have been characterized by consistently high rates (two or more times higher than the Russian average) over the past five years.

In all regions, the relative number of induced abortions decreased compared to 2018, with the exception of Moscow and the Republic of Tyva. At the same time, in several regions, the IA coefficient decreased by half over five years. We did not find a statistical relationship between the level of induced abortions at the beginning of the period and the rate of change over the period under review.

Table 3. Distribution of regions of the Russian Federation by the level of induced abortions on average for the period 2018-2022

Coefficient of induced abortions per 1,000 women aged 15-49	Regions
Low and very low (fewer than 10 per 1,000)	Republic of Ingushetia, Chechen Republic, Kabardino-Balkarian Republic, Dagestan Republic, Moscow, Kalmykia Republic, Moscow Region, Rostov Region, Karachaevo-Cherkess Republic, Belgorod Region, Saint Petersburg, Republic of Adygea, North Ossetia Alanya, Krasnodar region, Volgograd region, Voronezh region, Samara region, Tula region, Ryazan region, Sevastopol, Stavropol region, Lipetsk region, Kaluga region, Ivanovo region, Astrakhan region, Leningrad region, Republic of Mordovia, Ulyanovsk region, Republic of Bashkortostan, Yaroslavl region, Crimea, Tver region, Penza region, Saratov region
Average (10–15 per 1,000)	Omsk region, Tambov region, Khanty-Mansi Autonomous Okrug – Yugra, Kursk region, Nizhny Novgorod region, Republic of Tatarstan, Kaliningrad region, Vladimir region, Altai krai, Primorsky region, Novgorod region, Smolensk region, Orlov region, Republic of Khakassia, Murmansk oblast, Republic of Karelia, Chelyabinsk oblast, Bryansk oblast, Yamal-Nenets autonomous district, Kostroma oblast, Kamchatka krai, Udmurt Republic, Amur oblast, Chuvash Republic
High (over 15 per 1,000)	Khabarovsk Krai, Kirov Oblast, Vologda Oblast, Chukotka Autonomous Okrug, Magadan Region, Tomsk Region, Tyumen Region, Irkutsk Region, Buryatia Republic, Komi Republic, Arkhangelsk Region, Zabaikalsky Krai, Perm Krai, Republic of Mari El, Kemerovo region, Krasnoyarsk Krai, Novosibirsk region, Nenets Autonomous Region, Sverdlovsk region, Kurgan region, Orenburg region, Pskov region, Sakhalin region, Altai Republic, Tyva Republic, Republic of Sakha (Yakutia), Jewish Autonomous Region

Note: Regions are listed in ascending order of the indicator.

In order to level out annual fluctuations in the number of abortions in regions with small populations, we calculated the induced abortion rate in total for five years. In Russia as a whole, the IA coefficient on average for the period from 2018 to 2022 was 10.1 per 1,000 women aged 15-49 years. At the same time, the regions were divided into unequal groups. The largest group (34 regions) consisted of federal subjects with low and very low levels of induced abortions (less than 10 per 1,000 women), while 27 regions formed a group with a relatively high IA rate (more than 15 per 1,000 women); 24 regions were in the middle (table 3).

Spontaneous abortions

Analysis of the frequency of spontaneous abortions, which are also included in Russian statistics of pregnancies with abortive outcome, showed that regional differences here are much smaller than in the case of induced abortions: the coefficient of variation in 2022 was less than 24% (Table 4). Per 1,000 women of reproductive age, the number of miscarriages over the five years from 2018 to 2022 fluctuated from 2.8 (Tula region, 2021) to 11.0 (Magadan region, 2018). The all-Russian indicator decreased from 6.9 per 1,000 women aged 15-49 in 2018 to 5.9 per 1,000 in 2022.

Table 4. Territorial variation in the spontaneous abortion rate*, per 1,000 women aged 15-49 years, 2018-2022

	2018	2019	2020	2021	2022
Russia (Rosstat)	6.9	6.6	6.2	5.9	5.9
Minimum	3.8	3.7	3.5	2.8	3.3
Maximum	11.0	10.1	10.1	10.8	10.7
Average value**	7.1	6.8	6.3	6.0	6.0
Coefficient of variation***, %	21.3	22.0	23.7	25.6	23.7

Note: *Codes O02-O03 according to ICD-10. **Unweighted arithmetic mean. *** Ratio of standard deviation to arithmetic mean.

The regions with the highest and lowest rates of spontaneous abortions for the period from 2018 to 2022 are shown in Table 5. Four of the eight leading regions are located in the Far East, and two more are in Eastern Siberia. The average five-year indicator for the Russian Federation as a whole was 6.3 per 1,000 women aged 15-49.

Table 5. Regions with the lowest and highest rates of spontaneous* abortions, on average for the period 2018-2022

Regions with the lowest indicators	Number of spontaneous abortions per 1,000 women aged 15-49	Regions with the highest indicators	Number of spontaneous abortions per 1,000 women aged 15-49
Tambov oblast	3.8	Magadan oblast	10.4
Tula oblast	4.2	Irkutsk oblast	9.3
Republic of Mordovia, Belgorod oblast	4.3	Republic of Tyva, Chechen Republic, Kamchatka Krai	9.2
Republic of Adygea, Voronezh oblast, Republic of Dagestan	4.4	Amur oblast, Khabarovskiy Krai	8.7
Leningrad oblast	4.5	Ulyanovsk oblast	8.6

Note: *Codes O02-O03 according to ICD-10.

The dynamics of spontaneous abortions largely repeat the dynamics of fertility. When the fertility in Russia was growing (from 2006 to 2015), the number of miscarriages recorded by the

Ministry of Health (both absolute and per 1000 women) also tended to increase; in the last five years, both fertility and miscarriages have been decreasing. The value of the Spearman rank correlation coefficient ($r = 0.50$) indicates a connection between the relative number of spontaneous abortions and the general fertility rate in the region on average for 2018-2022. This is understandable, since spontaneous abortions mainly represent the loss of desired pregnancies. By the way, the value of the rank correlation coefficient between the average five-year rates of induced abortions and fertility rates (per 1,000 women of reproductive age) is much lower (0.34) and indicates a weak relationship between IA and birth rates, and this relationship, as in the case of miscarriages, is positive. Our result does not contradict the results of the mentioned cluster analysis of 2020, which combined regions with a low abortion rate and, at the same time, a low birth rate into one large cluster (Anokhina, Davletshina 2022).

It is estimated that up to 20% of clinical pregnancies end in miscarriage (Ministry of Health... 2021)⁵. Not a single Russian region goes beyond this limit; three regions stand out with elevated values of the indicator: Magadan (18% of miscarriages among pregnancies⁶), Ryazan (17%) and Samara (16%; 2022) regions.

At the same time, in 23 regions the proportion of miscarriages among pregnancies does not reach 10%, while the average for Russia is 11%. That is, we do not observe any serious anomalies in the proportion of spontaneous abortions among pregnancies; therefore, there is no compelling reason to assume that doctors disguise a significant portion of induced abortions in the country as miscarriages.

The reasons for the territorial differentiation in the level of spontaneous abortions require a separate study. In addition to the differences in the birth rate, which has already been discussed, important, if not the main, factors in the frequency of miscarriages are the health of women and the quality of medical care. A certain role may be played by the peculiarities of registration of terminations of pregnancy in some regions.

The role of the non-state health sector

Although the majority of registered terminations of pregnancy occur in organizations that are part of the Russian Ministry of Health, the role of the non-state sector in providing medical care for abortions is growing. In the country as a whole, the share of the Ministry of Health institutions in the total number of pregnancy terminations decreased from 95% in 1992 to 79% in 2022, while the share of non-state organizations approached 1/5. In several regions (Nizhny Novgorod, Bryansk, Yaroslavl), the share of non-state clinics in the structure of registered pregnancy terminations approached 40%, and in Mordovia and Buryatia it exceeded 40% (2022).

The contribution of the private sector to the provision of medical care for induced abortion in 2022 in Russia as a whole exceeded 30%. Moreover, in 11 regions⁷, the non-governmental sector accounts for more than half of induced abortions (2022), including more than 70% in Mordovia. In another 26 regions, the share of the non-state sector ranges from 30 to 50% (Table A in the Appendix). Thus, in almost half of the Russian regions, the role of private

⁵ Other sources say 10-15%, see <https://www.who.int/news-room/spotlight/why-we-need-to-talk-about-losing-a-baby>

⁶ The number of pregnancies was estimated as the sum of the number of births (including stillbirths) and the number of abortions.

⁷ These are: the Republic of Mordovia, Yaroslavl, Moscow, Ryazan, Voronezh, Nizhny Novgorod, Tula, Bryansk, Volgograd, Kostroma regions and Moscow.

clinics in the provision of and assistance with IA is very high. At the same time, in 7 regions, private services are apparently absent, among them the Republic of Tyva - the "leader" in 2022 in terms of abortion rates.

We cannot answer for sure whether this heterogeneity is associated with different degrees of coverage of "non-state" abortions by the accounting system or is a consequence of differences in the development of the private health sector, but we are inclined to believe that it is linked to differences in the development of commercial services and the standard of living of the population.

Private medical organizations much more often use the safest method of terminating pregnancy for women's health - medication. In 2022, in Russia as a whole, about 76% of medical (induced) abortions up to 12 weeks of pregnancy were performed in non-state clinics using the non-surgical medication method, while in the clinics of the Ministry of Health - 46%.

The use of the medication method is widespread in non-state clinics in all regions where such clinics operate. Thus, in 52 regions, the share of medical abortions in 2022 exceeded 75% of all induced abortions up to 12 weeks of pregnancy, including 25 regions where it was either close to or equal to 100%.

In state institutions subordinate to the Ministry of Health, the picture is much more varied: the share of medical abortions among induced abortions up to 12 weeks of pregnancy varies from 0 in the Chechen Republic to 83% in the Altai Krai and 100% in Ingushetia. In Ingushetia, as already mentioned, only 15 induced abortions were registered in 2022, including 5 up to 12 weeks of pregnancy, and these 5 abortions, according to the report, were performed using the medical method. Only in five regions (including Ingushetia) did the share of the non-surgical method in institutions of the Ministry of Health exceed 75%, while in 19 regions it was below 20%. It is interesting that the last group includes Moscow and the Moscow region. Such diversity probably reflects both differences in the position of local officials regarding the promotion of modern methods of termination of pregnancy, and shortcomings in statistical recording in some regions.

On average, across all medical organizations in the country, the share of induced abortions up to 12 weeks of pregnancy performed using the medical method was 56% in 2022, while by region it ranged from 0 in Chechnya to 85% in Mordovia and 100% in Ingushetia. In Chechnya, commercial abortions are absent, while Mordovia leads in the share of abortions performed in non-state clinics.

Abortions and contraception

In terms of contraception use, modern Russia differs little from other countries with a post-transitional type of fertility. The overwhelming majority of Russians in a marriage/partnership resort to one or another method of protection against unintended pregnancy. It is thanks to the expansion of modern contraception that Russia has managed to achieve a significant reduction in the abortion rate (Vishnevsky, Denisov, Sakevich 2017).

According to Ministry of Health reports, at the end of 2022, 6.4 million women were registered as using intrauterine or hormonal contraception, which is 18.5% of all women of reproductive age. Among these women, 2.52 million (7.3% of women of reproductive age) used an intrauterine device (IUD) and 3.84 million (11.2%) used hormonal contraception (Rosstat 2023: 64).

However, these figures vary greatly by year and region. In 2022, the total share of women using IUDs and hormonal contraception was the lowest in the Chechen Republic and Moscow (1.65 and 1.63%, respectively), and the highest in the Altai Krai (57.6%). The proportion of women aged 15-49 using hormonal contraception varied from 0.9% in Chechnya to 32% in Altai Krai, and those using IUDs – from 0.3% in Moscow to 26% in Altai Krai (Federal State Budgetary Institution “TsNIIOIZ”... 2023).

In addition to Altai Krai, a high percentage of those using hormonal contraception is recorded in the Lipetsk (29.8%), Novgorod (26.4%) and Tyumen (25.6%) regions, and those using IUDs – in Tatarstan (23.2%), the Khanty-Mansiysk Autonomous Okrug (22.3%) and Mordovia (21.5%). The place of these regions in the ranking by the level of induced abortions can be seen in Table 3; none of them, except for Lipetsk Oblast and Mordovia, belong to the regions with the lowest abortion rates.

Contrary to expectations, the calculations showed a moderate positive relationship between the Ministry of Health data on the use of hormonal and intrauterine contraception by women (in total) and the rate of induced abortions in the region. That is, the more widespread these two types of modern contraception are according to the Ministry of Health reports, the more induced abortions there are. The Spearman rank correlation coefficient was 0.39 (2022)⁸. This may indicate both the unreliability of the Ministry of Health statistics in a number of regions, and the fact that the population of regions with a low abortion rate successfully uses other methods of preventing unintended pregnancy. Thus, we were unable to confirm the hypothesis of a strong effect of contraceptive use on the level of abortion based on statistics from the Ministry of Health.

Conclusion

In the post-Soviet years, the abortion rate in Russia has approached the average level for developed countries (Sakevich, Denisov 2019), and the problem of abortion as a medical and social problem has lost its urgency. However, the all-Russian indicator hides quite significant interregional differences. In general, there is a tendency for the abortion rate to increase from west to east and from south to north. It is noteworthy that earlier researchers noted a north-eastern gradient in mortality in Russia (Vallin et al. 2005).

The fewest abortions are registered in the North Caucasus Federal District, while the Ural, Siberian and Far Eastern Federal Districts form a group of regions with a relatively high abortion rate, 1.4-1.5 times higher than the national average.

Territorial heterogeneity in the level of induced abortions is higher than in the total number of pregnancies with abortive outcome. The difference between the highest and lowest rates of induced abortions per 1,000 women of reproductive age on average for 2018-2022 was almost six times (excluding four republics of the North Caucasus, the Nenets Autonomous Okrug, Moscow and Kalmykia). As of 2022, 64% of women of reproductive age (22 million out of 34.5) lived in regions with low and very low rates of induced abortions, 21% (7.1 million) in regions with an average rate, and finally 16% (5.4 million) in regions with a relatively high rate of induced abortions. There is no reduction in the dispersion, and in the latter group of regions, the problem of abortion remains relevant. The reasons for the lag of several regions in reducing the

⁸ The calculations excluded the Republic of Dagestan, where in 2022 there were no cases of use of IUDs and hormonal contraception (FGBU “TsNIIOIZ”... 2023).

prevalence of abortions are yet to be studied. But globally, even the group of Russian territories “with a high rate of abortions” is far from the world leaders. In most regions, in the coming years, we can expect a slowdown in the decline or stabilization of the number of induced abortions due to the significant depletion of the reserves for their reduction.

An attempt to link the level of induced abortions in the regions of Russia with the use of contraception, based on official statistics from the Ministry of Health on the use of two methods of contraception - IUD and hormonal, did not yield results. In our opinion, the reason lies in the unreliability of the statistics of the Ministry of Health on the use of contraceptive methods in a number of regions. In addition, it can be assumed that the population of regions with a low level of abortions successfully use other methods of preventing unintended pregnancy, in addition to intrauterine and hormonal contraception.

In Russia, there is a tendency towards a gradual redistribution of induced abortions in favor of the non-state health sector. This indicates, in particular, a decrease in the availability of medical care under compulsory medical insurance and an increase in barriers to receiving care in state clinics⁹. Women are looking for quality medical services (Zdravomyslova, Temkina 2012) and in a situation of reproductive choice they prefer a safer medical method of termination of pregnancy, which is practiced much more often in private than in state clinics.

In the total number of registered terminations of pregnancy, the proportion of miscarriages is growing; in 2022 it exceeded 40%. The differences between Russian regions in terms of the frequency of miscarriages are not as great as in terms of the frequency of induced abortions, and we did not identify any serious anomalies in the proportion of miscarriages among pregnancies. Nevertheless, the leadership of regions in which the relative rate of spontaneous abortions is 1.5 times higher than the national average should pay attention to this problem. Prevention and treatment of miscarriage is a small demographic reserve, not to mention a way of helping a woman and a couple in a difficult life situation (Starodubov, Sukhanova 2012).

The analysis has shown that comparing Russian regions by the total number of abortions does not make much sense, since the ratio of induced and spontaneous abortions among pregnancies with abortive outcome varies greatly between regions: in some regions, most abortions are miscarriages, while in others, most abortions are induced.

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⁹ Sakevich V.I., Denisov B.P. (2024) Birth control in Russia: what do official statistics and sample surveys show? *The Journal of Social Policy Studies*, 22(3), 387-408. <https://doi.org/10.17323/727-0634-2024-22-3-387-408>

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Appendix

Table A. Some indicators of registered abortions in the regions of Russia, 2022

	Total number of abortions, thous.	Number of abortions per 1,000 women aged 15-49	Percentage of abortions performed spontaneously* in total abortions, %	Number of induced** abortions per 1,000 women aged 15-49	Percentage of induced** abortions performed in non-state organizations, %
Russian Federation	503.8	14.6	40.3	8.7	31.0
Belgorod oblast	2.7	7.7	49.5	3.9	24.3
Bryansk oblast	4.5	17.1	27.9	12.4	51.2
Vladimir oblast	4.0	13.4	36.8	8.5	44.4
Voronezh oblast	4.7	9.0	42.7	5.2	57.5
Ivanov oblast	2.2	10.8	43.2	6.2	16.3
Kaluga oblast	3.0	12.6	48.0	6.6	33.1
Kostroma oblast	2.3	18.5	35.9	11.9	50.6
Kursk oblast	3.3	13.7	39.1	8.4	38.8
Lipetsk oblast	3.0	11.7	48.5	6.1	14.6
Moscow oblast	19.0	9.2	54.4	4.2	59.5
Orlov oblast	2.5	15.7	25.7	11.7	17.0
Ryazan oblast	3.5	14.5	50.1	7.2	58.2
Smolensk oblast	3.0	15.5	28.5	11.1	28.1
Tambov oblast	2.4	11.6	32.4	7.8	47.8
Tver oblast	3.2	12.2	42.3	7.0	18.2
Tula oblast	3.8	11.4	37.6	7.1	55.2
Yaroslavl Oblast	3.7	13.6	44.3	7.6	63.9
Moscow	30.7	9.9	64.9	3.5	50.4
Republic of Karelia	1.8	15.5	41.9	9.0	17.6
Republic of Komi	3.9	22.9	31.7	15.7	16.8
Nenets Autonomous Okrug	0.2	23.9	27.6	17.3	4.5
Arkhangelsk oblast without Nenets autonomous okrug	4.4	20.5	29.3	14.5	35.5
Vologda oblast	4.9	19.2	33.0	12.9	26.0
Kaliningrad oblast	3.3	13.7	39.6	8.3	47.3
Leningrad oblast	5.1	10.3	46.9	5.4	12.5
Murmansk oblast	3.0	19.3	39.9	11.6	21.4
Novgorod oblast	2.0	15.4	33.3	10.3	19.6
Pskov oblast	3.0	23.2	20.9	18.3	24.2
Saint Petersburg	15.7	11.3	54.4	5.1	38.7
Republic of Adygea	1.0	8.5	47.3	4.5	7.1
Republic of Kalmykia	0.4	7.2	66.2	2.4	0.0
Republic of Crimea	5.1	11.8	44.6	6.6	8.7
Krasnodar Krai	14.9	11.1	49.8	5.6	45.0
Astrakhan oblast	2.7	11.8	59.2	4.8	40.4
Volgograd oblast	7.8	13.5	46.2	7.2	50.9
Rostov oblast	9.6	9.7	55.5	4.3	30.9
Sevastopol	1.4	10.3	42.3	5.9	17.2
Republic of Dagestan	5.2	6.2	73.0	1.7	4.5
Republic of Ingushetia	0.8	5.9	98.2	0.1	0.0

	Total number of abortions, thous.	Number of abortions per 1,000 women aged 15-49	Percentage of abortions performed spontaneously* in total abortions, %	Number of induced** abortions per 1,000 women aged 15-49	Percentage of induced** abortions performed in non-state organizations, %
Republic of Kabardino-Balkaria	1.3	5.6	76.5	1.3	14.9
Republic of Karachay-Cherkessia	1.0	8.1	49.7	4.1	5.0
Republic of North Ossetia - Alanya	1.7	10.5	48.0	5.5	0.0
Chechen Republic	4.1	10.5	89.6	1.1	0.0
Stavropol Krai	8.3	11.7	55.3	5.2	21.8
Republic of Bashkortostan	10.7	11.4	47.6	6.0	38.1
Republic of Mari El	3.4	22.3	29.2	15.8	35.2
Republic of Mordovia	2.0	11.8	29.9	8.2	70.4
Republic of Tatarstan	14.7	15.8	37.9	9.8	37.8
Udmurt Republic	5.7	17.1	27.5	12.4	35.3
Chuvash Republic	5.1	19.4	34.1	12.8	17.7
Perm Krai	12.5	21.4	32.6	14.4	19.2
Kirov oblast	5.0	20.4	35.8	13.1	27.3
Nizhny Novgorod oblast	11.3	16.1	35.6	10.4	56.9
Orenburg oblast	10.0	23.9	28.3	17.1	22.6
Penza oblast	3.7	13.3	36.4	8.5	43.0
Samara oblast	9.7	13.3	57.4	5.7	15.8
Saratov oblast	8.3	15.0	36.5	9.5	37.0
Ulyanov oblast	3.5	13.6	52.0	6.5	47.8
Kurgan oblast	4.5	28.8	24.9	21.6	8.2
Sverdlov oblast	24.6	24.9	26.0	18.4	16.7
Khanty-Mansi autonomous okrug - Yugra	6.9	15.6	38.8	9.5	9.5
Yamalo-Nenets autonomous okrug	2.8	20.1	38.6	12.3	21.8
Tyumen Oblast (excluding autonomous okrugs)	8.1	21.0	32.2	14.2	41.7
Chelyabinsk oblast	14.0	17.5	35.1	11.4	29.0
Republic of Altai	1.2	24.0	28.8	17.1	37.3
Republic of Tyva	2.7	32.1	25.7	23.9	0.0
Republic of Khakasia	2.0	15.6	33.1	10.5	0.7
Altai Krai	8.0	16.2	34.1	10.7	49.4
Krasnoyarsk Krai	15.9	22.8	30.4	15.9	16.8
Irkutsk oblast	13.5	23.9	36.2	15.3	16.9
Kemerovo oblast	12.8	20.8	21.9	16.2	17.6
Novosibirsk oblast	14.8	21.8	26.0	16.1	32.3
Omsk oblast	5.4	13.0	25.2	9.7	23.6
Tomsk oblast	5.1	19.6	27.4	14.2	12.9
Republic of Buryatia	4.5	18.6	30.8	12.9	39.3
Republic of Sakha (Yakutia)	7.1	28.1	23.0	21.6	36.2
Zabaikal Krai	5.7	22.8	28.1	16.4	38.6
Kamchatka Krai	1.4	20.0	44.0	11.2	26.0
Primorsky Krai	7.1	16.3	37.7	10.1	37.3
Khabarovsk Krai	7.2	23.2	35.5	15.0	33.9
Amur oblast	4.0	21.6	37.6	13.5	18.1

	Total number of abortions, thous.	Number of abortions per 1,000 women aged 15-49	Percentage of abortions performed spontaneously* in total abortions, %	Number of induced** abortions per 1,000 women aged 15-49	Percentage of induced** abortions performed in non-state organizations, %
Magadan oblast	0.8	24.4	43.9	13.7	0.0
Sakhalin oblast	2.9	26.6	33.2	17.8	27.5
Jewish autonomous oblast	0.9	24.2	24.3	18.3	0.8
Chukotka autonomous okrug	0.3	23.9	24.7	18.0	0.0

Source: Rosstat data, authors' calculations.

Note: * - Codes O02-O03 according to ICD-10. ** - The number of induced abortions was obtained by subtracting the number of spontaneous abortions (including abnormal products of conception) from the total number of pregnancy terminations.