

Study of discontinuation issues in the blood service

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Abstract. The article examines the issue of suspension from blood donation and discusses their causes in persons who applied to blood service institutions. It was revealed that for 3 years, on average, 13% of those who applied were not allowed to donate. Of the total ineligible, 10% were temporarily suspended from donating. The main part of them - 8% due to low hemoglobin levels.

1 Introduction

If we take a scientific approach to the motto of the blood service "Only a healthy person can be a blood donor", we can think about a healthy segment of the population through information about those who become blood donors and are excluded from donation for one reason or another. The essence of the non-discriminatory donation development program is that a blood donor must donate blood voluntarily without any material benefit. Then there will be no application for blood donation from sick, needy or socially vulnerable groups. And this increases the safety of donor blood as recommended by the WHO [1-16]. It follows that if free blood donation is widely promoted in our country, the number of healthy people applying for blood services will increase. Their study provides indirect information about the health of the population.

The aim of the study was to study the situation of the population applying for blood services, ie the exclusion of donors from donation.

2 Methods

Donors who applied to the Republican Blood Transfusion Center (RQM) were medically examined in accordance with the "Regulation on the procedure for donating blood and its components" approved by the Order of the Ministry of Health No. 423 of December 16, 2013 [3]. It is known that there are two ways to prepare blood from a donor. with - blood centers (republic, regional, city blood transfusion stations) and places (organization, institution, educational institution, hospital, etc.) are prepared through a mobile group. At the blood centers, donors were first checked through the information base of the Single Donor Center (UDC), then they filled out a special medical questionnaire - the "donor

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questionnaire" and were examined by a doctor. Then, the amount of hemoglobin in the blood was determined using a hemoglobinometer (APEL HG-220, Japan). If there was an obstacle to donation at each of these stages, the donor was not allowed to proceed to the next stage.

A person who passed all stages was allowed to donate blood. When the mobile group organized donation days in the field, the donors were initially selected by a doctor through oral interview (through questionnaire data), and at the next stage, they were mainly selected through the GNP database and blood hemoglobin levels. Inspections were conducted during 2019-2021.

3 Results obtained and analysis

The results of the inspections are presented in Tables 1 and 2. As can be seen from the tables, in 2019, the ratio of donors who applied to the blood center and mobile groups was 62:38, and in 2020, this ratio was 58:42. In 2021, it was 56:44. It can be seen that the share of blood preparation through mobile groups, which is a modern blood service strategy, is increasing. This shows not only the development of the activity of mobile groups in RQQM, but also the increase of the share of blood preparation from voluntary donors.

Contraindications were found in 10.4% of those who applied to the blood center for donation purposes in 2019, in 2020 this figure was 11.5%, and in 2021 it was 12.2%. The analysis shows that 2.2% of the contraindications in 2019 were absolute contraindications (1.6% of them according to GDP and 0.6% according to the questionnaire), the remaining 8.2% of contraindications - provisionally calculated and according to the questionnaire - 2.2%, according to the hemoglobin indicator - 3.2% and according to the general condition - 2.8%. In 2020, these figures were as follows: 2.6% were absolute contraindications (of which 1.7% were based on GDP and 0.9% were based on questionnaires), the remaining 8.9% were temporary contraindications, and 2.2% were based on questionnaires, according to the hemoglobin indicator - 4.6% and according to the general condition - 2.1%. By the end of 2021, these indicators have become more developed: 3.5% are absolute contraindications (1.4% of them according to GDP and 2.1% according to the questionnaire), the remaining 8.7% of contraindications are temporary, that is, according to the questionnaire - 3.9%, according to the hemoglobin indicator - 3.8% and according to the general condition - 1%. The analysis of the results shows that the number of those who apply to the donation department, who are excluded from donation, is increasing in parallel with the number of those who apply. Absolute contraindications increased mainly due to the questionnaire. According to the GDP database, the percentage of excluded people has not changed much. Because the fact that a person included in the NDP database is not allowed to donate and the strict implementation of verification from the NDP database when a donor applies has brought these indicators to a state of equilibrium, and the number of "relative donors" donating blood from one blood center to another began to decrease. As a result of timely updating of the NDP database and filling and use by all regional blood service institutions, this indicator was prevented from growing.

Our next indicator is the donor's questionnaire, after the questionnaire was personally filled out by the donor, its analysis with the help of a doctor led to the additional identification of people with obstacles to donation. Although this reduces the number of donations and has a negative effect on it, it has a positive effect on the quality of donations (preventing a decrease in the quality index of prepared blood), and protects the health of the donor from various possible changes, that is, when impossible situations are detected, this person is not allowed to donate blood.

In short, we identify people who are not suitable for blood donation, explain to them that they cannot become a blood donor due to their illness, exclude them from donation,

and protect them from negative indicators that affect the quality of donor blood prepared in the blood service. The second side of the issue is the percentage of those who are temporarily excluded from donation. Those included in this indicator can become blood donors after a certain time, that is, after temporary changes in the body, conditions, diseases, they can be returned to the ranks of donors.

The analysis of the obtained results showed that among those who were temporarily excluded, those who were excluded from donation due to the amount of hemoglobin in the blood were more than those who were excluded for other reasons. Therefore, through the measures aimed at treating anemia, concrete measures for the prevention of anemia among different strata of the population, awareness among young people, women, especially women of childbearing age, increasing the number of blood donations by raising the hemoglobin level of these people, returning them to the healthy group, and restoring them to the ranks of donors possible [4, 5].

Contraindications were found in 15.6% of those who applied for on-site donation days through the mobile group in 2019, in 2020 this figure was 16.3%, and in 2021 it was 14.0%. Of the contraindications in 2019, 1.4% were absolute contraindications (i.e. excluded from donation according to the GNP database), and the remaining 14.2% were contraindications - temporary exclusion from donation, due to a hemoglobin indicator below the set limit.

In 2020, these indicators were as follows: 1.2% - absolute contraindications (ie, according to the GDP database), the remaining 15.1% contraindications - temporary exclusion, based on low hemoglobin level. By the end of 2021, these indicators have moved in a positive direction: 0.8% were absolute contraindications (ie, according to the GNP database), and 13.2% were based on hemoglobin values below the norm.

The analysis of the results shows that the average number of those who applied for donation at the locations (objects at the address visited by the mobile group) on donation days is 15%, that is, every seventh of those who applied were not allowed to donate according to medical instructions.

The percentage of rejections through the GNP database has been decreasing, and on average is 1%, that is, every hundredth of the applicants and every fifteenth of the rejections are excluded from donation because they are listed in the GNP database. The non-donation of a person included in the NDP database has its effect in organizations that organize regular donation campaigns, ensuring blood safety without unnecessary hassles (taking blood from donors listed in this database and conducting repeated checks, determining its unfitness, destroying blood in the established order, etc.) is contributing. On average, 14% of those excluded from donation due to the hemoglobin level in the blood was below the norm. So, these data once again confirm our above opinion, the importance of measures for the prevention and treatment of anemia among the population, through which not only people's health can be strengthened, but also the number of blood donors can be dramatically increased.

In short, about 13% of those who applied to RQQM in the last 3 years did not donate blood, while the remaining 87% donated blood. About 10% of people who are not allowed to donate are temporarily excluded from donation for various reasons, and the main part of them, that is, 8%, could not donate blood due to low hemoglobin. Similar information is given in the literature [6, 7].

It should be noted that it is not for nothing that special attention is paid to the prevention of anemia in the health care programs carried out in the health care system, and it is necessary to constantly monitor its implementation.

It can also be noted that the seventh-eighth of the persons who consider themselves healthy have functional changes, which require active rehabilitation.

Table 1. Information about persons excluded from donation (blood center).

Years	The number of applicants	Excluded from donation, total	Including				
			According to the list SDC	The questionnaire is permanent	The question is temporary	On hemoglobin	General condition
2019	21761	2267	348	133	487	696	603
2020	19174	2207	321	170	427	878	411
2021	25432	3104	370	533	990	955	256
Total	66367	7578	1039	836	1904	2529	1270

Table 2. Information on disenfranchised persons (mobile group).

Years	number of applicants	Excluded from donation, total	Including	
			According to the list SDC	On hemoglobin
2019	13561	2110	196	1914
2020	14039	2290	174	2116
2021	19666	2758	153	2605
Total	47266	7158	523	6635

It should also be noted that every seventh to eighth of people who consider themselves healthy have functional changes, which require active rehabilitation.

4 Conclusion

The article examines the issues of disqualification from donation to the blood service and analyzes their causes. It was found that an average of 13% of those who applied in 3 years were not donated. About 10% of non-donated people were not temporarily donated for various reasons, and the majority of them, i.e. 8%, were unable to donate blood due to low hemoglobin.

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