

### Statistical Analysis of Awareness of Cardiologists and Heart Surgery Patients about High-Tech Medical Care in Samarkand Region

**Rizaev Jasur Alimzhanovich**

Doctor of medical sciences, professor, rector of Samarkand State Medical University  
(Samarkand, Uzbekistan)

**Saidov Maksud Arifovich**

Candidate of Medical Sciences, Director of the National Children's Medical Center  
(Tashkent, Uzbekistan)

**Khasanjanova Farida Odilovna**

PhD, Assistant of the Department of Internal Medicine and Cardiology No. 2, Samarkand State  
Medical University (Samarkand, Uzbekistan)

#### Article Information

**Received:** May 22, 2023

**Accepted:** June 23, 2023

**Published:** July 24, 2023

**Keywords:** cardiovascular diseases, awareness, high-tech medical care, questioning.

#### ABSTRACT

*This article is based on the analysis of the effectiveness of the questionnaire and the level of awareness of patients with cardiovascular diseases (CVD) about high-tech medical care (HTMC) in the Samarkand region. A questionnaire survey was conducted among 110 patients hospitalized in the Samarkand regional branch of the Republican Specialized Scientific and Practical Medical Center for Cardiology (SRF RSNPMCK), who received VMP. Based on the results of the survey, the awareness of patients with CVD was assessed based on their age, place of residence, level of education and social status.*

Cardiovascular diseases are the main cause of mortality worldwide, from which, according to the World Health Organization (WHO), 17.7 million deaths per year are recorded [1, 5, 10, 15]. According to the WHO, in recent decades in economically developed and developing countries of the world, despite the achieved medical and health-improving successes, the introduction of new high-tech equipment in cardiology practice, the daily improvement of modern diagnostic research methods and high-tech methods of treatment, high funding costs aimed at diagnosing, treating and preventing diseases, high mortality from CVD is still noted [2, 6, 11, 16]. Timely detection of patients with CVD even at the early stages of the development of the disease using high-tech diagnostic and therapeutic methods is one of the urgent problems of modern cardiology [3, 7, 12, 17].

In order to timely solve the problems associated with the provision of HCW, it is necessary to set

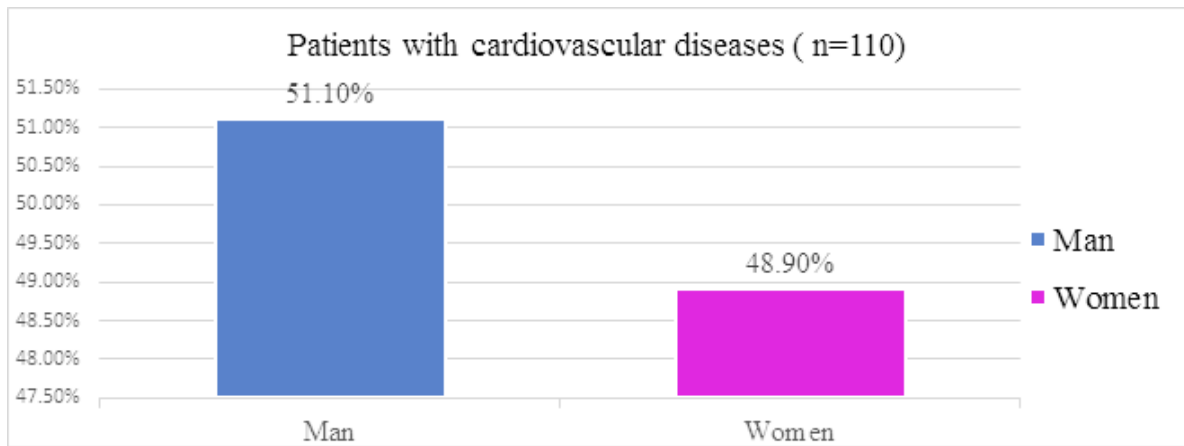
a goal to increase the availability, effective and high-quality provision of HCW and the application of this goal to the most diverse segments of the population [4, 8, 13, 18]. At the present time, according to scientists around the world, large-scale various research works are being carried out, which are aimed at solving topical issues related to determining the availability, improving the quality of VMPs, as well as issues aimed at increasing public satisfaction with various types of VMPs [8, 19, 25, 30]. At the same time, it is important to properly study and use the opinions and assessments of the population from different regions of the Republic of Uzbekistan on the availability and quality of high-tech medical care, since the opinions and assessments of patients with CVD about VMPs can become the subject of numerous and diverse goals and objectives of a number of studies [9, 20, 26, 29]. The use of estimates and opinions of the population from different regions of the Republic of Uzbekistan about the quality, accessibility and timeliness of the provision of HCMC is considered as the most important sign of the state of the health care system and the result of ongoing changes in this area, which gives rise to serious methodological problems [21, 24, 28].

In our republic, many studies have been conducted that are limited to the analysis of the dynamics of general assessments of public satisfaction with the state of healthcare, there are no comparisons of data on indicators of accessibility, timeliness and quality of the provision of HTMC to populations with CVD in various regional cardiological medical organizations and specialized medical institutions involved in the provision of HTMC [22, 23, 27]. The presence of differences in the assessment of the satisfaction of the population about the VMP between public and private medical institutions is the subject of research.

**Purpose of the study:** to study the level of awareness of patients with cardiovascular pathologies regarding issues related to high-tech medical care.

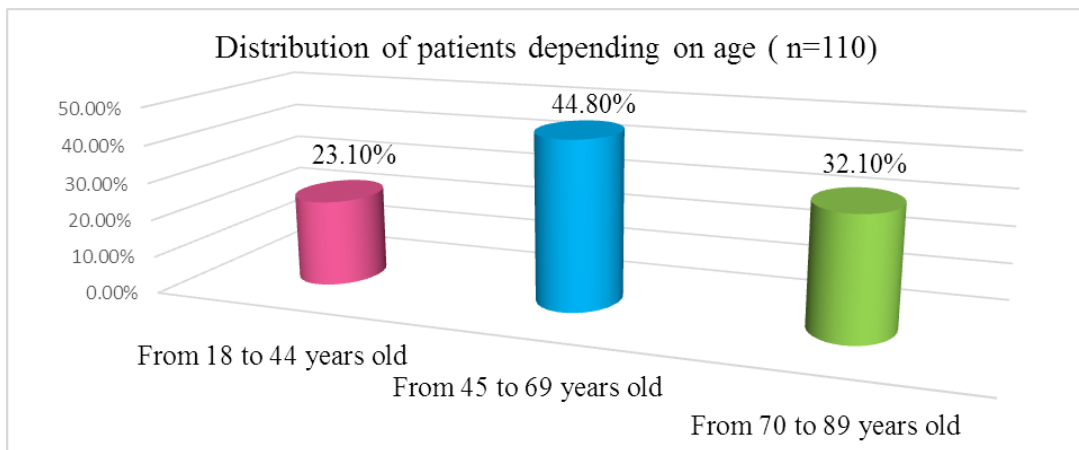
**Materials and research methods.** The study included 110 patients with CVD, hospitalized in the Samarkand regional branch of the Republican Specialized Scientific and Practical Medical Center for Cardiology (SRF RSNPMCK), who received VMP. To assess the awareness of patients, a medical and social study was conducted using a questionnaire. All patients were anonymously surveyed, while maintaining complete confidentiality. The introductory part of the survey began with questions that are designed to clarify the socio-demographic characteristics of patients. These questions were followed by introductory and main questions, which were the main information providers. According to their content, we can fully determine the purpose of our study. Using the questionnaire, one can assess the level of awareness of patients with CVD based on the age of patients, place of residence, level of education and social status. An important item contained in the questionnaires for all patients were questions that made it possible to identify positive and negative aspects in the organization of the provision of HTMC. The calculation showed that to obtain 95% reliability of our sample, it is enough to study 110 patient questionnaires. The results of the survey were processed using the Microsoft software product access.

**Research results.** In analyzing the opinions expressed by patients during the course of this survey, they helped to enable us to suggest and recommend the most significant ways to increase public awareness on a number of pressing issues related to the provision of HTMC. The present study involved 110 patients who received various types of high-tech medical care. By gender, 51.1% were women and 48.9% were men (Fig. 1).



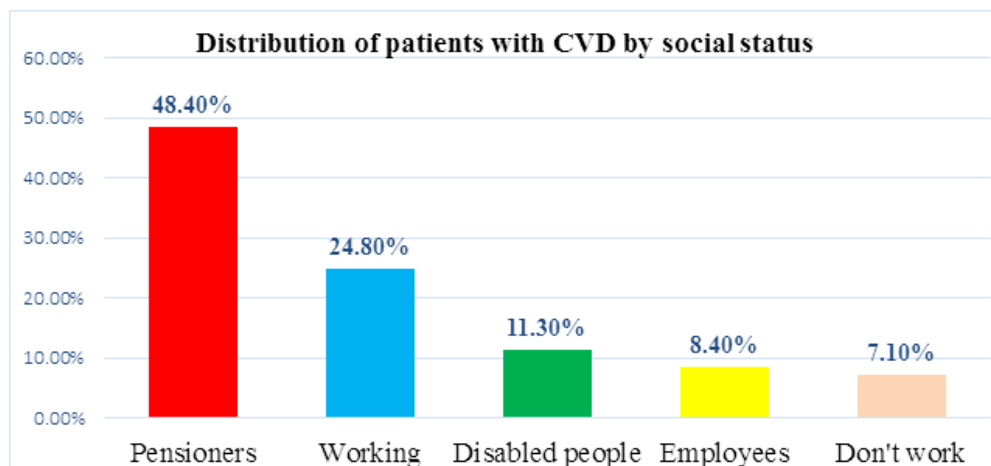
**Rice. 1. Distribution of patients with cardiovascular diseases by gender**

When distributing patients by age categories, the following groups of patients were identified: patients at a young age from 18 to 44 years old - 23.1%, at an average age from 45 to 69 years old - 44.8%, in the elderly from 70 to 89 years old - 32.1%. Since VMP is in demand in patients with chronic diseases, which is of a long-term, persistent nature, this led to the predominance of middle-aged and elderly patients among the surveyed patients (Fig. 2).



**Rice. 2. Distribution of patients by age categories**

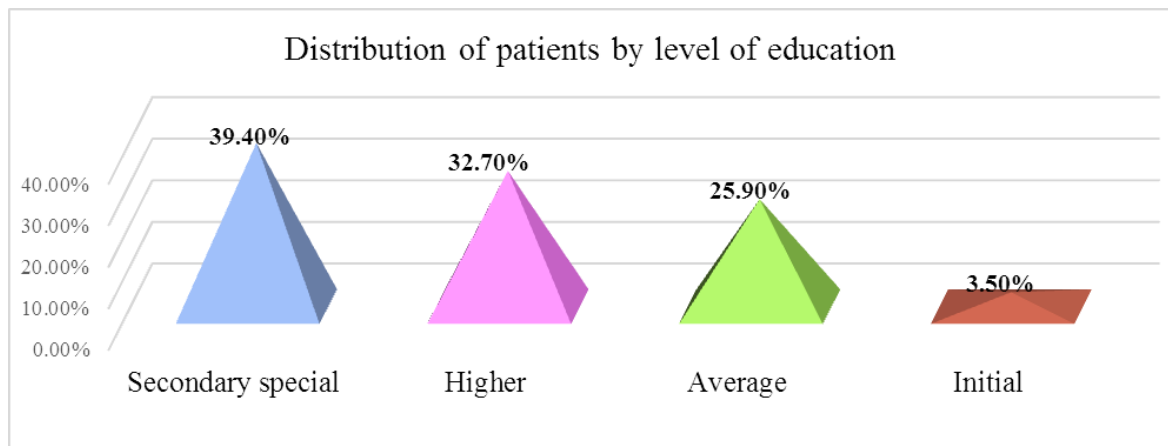
When studying patients by social status, the following data were noted: patients of retirement age - 48.4% made up the largest part, 24.8% of able-bodied patients provided with work, 11.3% - patients with disabilities of various categories, 8.4% of patients with official work activity and only 7.1% of patients with temporary disability - without any work (Fig. 3).



**Rice. 3. Distribution of patients with CVD by social status**

When analyzing patients with CVD, depending on their place of residence, it was noted that 45.3% of patients were residents of the city of Samarkand, 54.7% of patients were residents of districts of the Samarkand region. This distribution indicates that the VMP is in demand almost equally among both urban and rural residents.

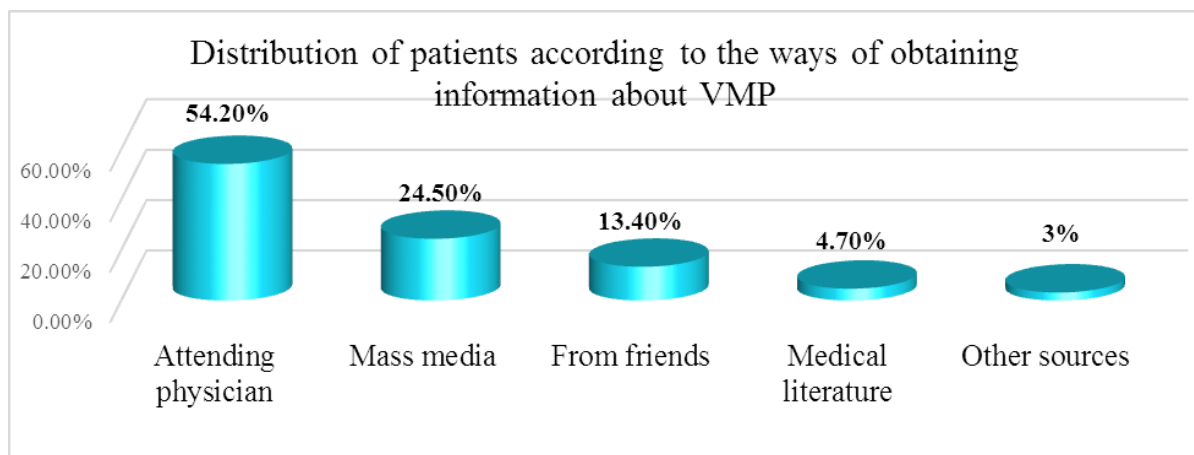
When interviewing patients with CVD regarding the level of education, it was noted that in the vast majority of cases, patients have secondary specialized and higher education (39.4% and 32.7%, respectively), and patients with secondary education accounted for 25.9%, and with primary - 3.5% (Figure 4).



**Rice. 4. Distribution of patients with CVD by level of education**

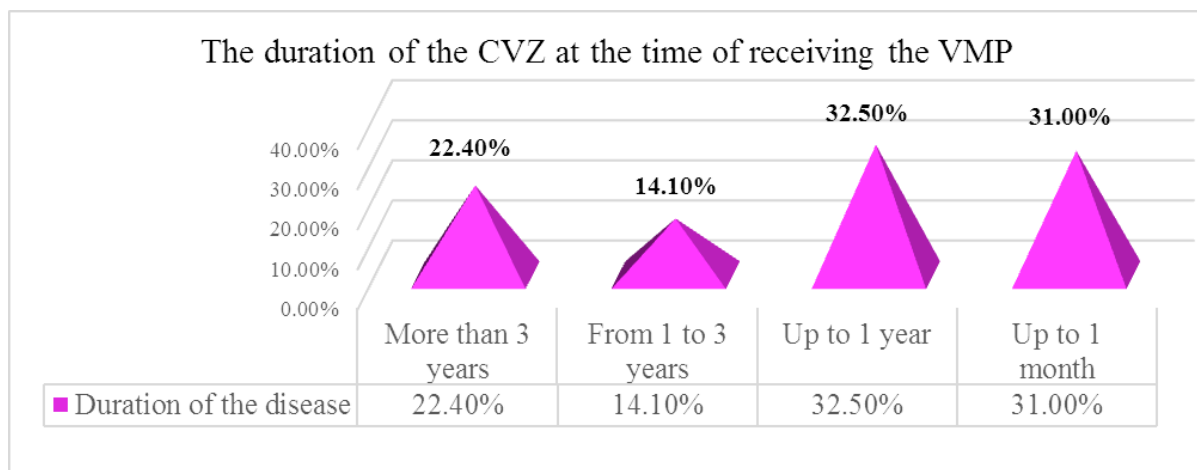
When interviewing patients to assess their own level of knowledge and ways to obtain the necessary information about the VMP, it was noted that among the patients who received the VMP, only 56.7% of patients were familiar with the concept of the VMP and every fifth patient knew nothing about the VMP at all, that is, even after receiving this type of expensive medical care, patients were not at all aware of the UMP. At the same time, patients with higher education (71%) were the most informed about UMP, and patients with primary and secondary levels of education were less informed, and the level of awareness about UMP among patients with CVD did not depend on the social status of the patient, not on their place of residence.

Questions regarding how information about UMP was obtained as among patients were the most interesting. In 54.2% of cases, patients noted that the most significant source of information about UMP was directly their attending physicians, which were the main sources of information about UMP. In 24.5% of cases, patients noted that they received information about the indications, contraindications, features and characteristics of the VMP from the media (television, the Internet: social networks, flyers and banners). Then, in descending order, came: from the conversation of acquaintances or those who had previously used this method - 13.4%, special medical literature (journals, monographs, textbooks, guidelines, articles and abstracts) - 4.7% and part of the respondents (3.2 %) pointed to other sources, without specifying which ones (Fig. 5). The most popular source of information, regardless of age, was the Internet. This makes it possible to use it in the future as the main resource for increasing the level of knowledge in matters related to the VMP.



**Rice. 5. Distribution of patients according to the ways of obtaining information about UMP**

According to the results of a survey of patients with CVD, it was revealed that they were most often referred to the provision of HTMC by the attending physicians of the hospital (52.4%) and the outpatient clinic (32.6%), the heads of the department (10.3%) and the doctors of the advisory polyclinic (4.7%). When studying the duration of the disease at the time of receiving VMP, about 22.4% of patients with CVD suffered for more than 3 years, in 14.1% of patients the disease lasted from 1 to 3 years, in 32.5% - about 1 year and 31% of patients suffered from CVD within a month (Fig. 6).



**Rice. 6. Distribution of patients according to the duration of CVD at the time of receiving VMP**

Considering that HCMC is provided free of charge, it was interesting whether the patients know how much money is allocated from the state for the provision of one or another type of HCMC. In only 28% of cases, patients were able to name the approximate amount spent on performing VMP, of which more than half were very far from the true costs of this type of care and 72% of patients did not even guess how much was spent on their treatment using VMP. But this is not surprising, because it is impossible to know the costs without understanding what type of VMP you have received.

At the end of the survey, all patients noted, in their opinion, the positive and negative aspects in the process of receiving and providing VMP. Of the positive aspects, the highest priority in the provision of HTMC for patients was the only opportunity for seriously ill patients, it was noted by 54.6% of patients, other patients noted that the most important was the saving of time (23.5%) and cost savings (13.8%). Other patients noted other important points (8.1%) or indicated the presence of more than 1 positive factor.

Along with this, patients also noted negative aspects in the provision of VMP. In 33.4% of cases, patients in the first place put the length of time for collecting documents, in 21.6% of cases, patients noted the length of time waiting for responses from medical organizations directly providing HTMC, in 8.3% of patients they noted a low level of awareness of doctors about HTMC, in 30.2% of patients, several negative aspects were indicated at once, and 6.5% of patients did not find their reflection in the provision of HTMC.

**Discussion.** The conducted medical and social study, with subsequent processing of the information obtained and data analysis, contributed to the opportunity to present a fairly objective picture of the expressed opinions of patients on a number of topical issues in the provision of HTMC. This made it possible to determine the level of awareness of all patients on important issues of upper urinary tract infections. Unfortunately, one should agree with a number of authors [11] and note the unsatisfactory level of awareness of patients about UMP, as well as even lower awareness of patients who received UMP. Patients not only do not know anything about VMP, but they also have no idea about the costs that are necessary for its provision. Many respondents misunderstand the procedure for granting MTCT and believe that it can only be provided at the expense of personal funds, i.e. on a paid basis. Patients in general find it difficult to distinguish between high-tech and specialized medical care, especially at the present time, when compulsory medical insurance funds are also a source of funding.

**Conclusion.** The main one, of course, is the desire of all patients, regardless of the degree of their knowledge, to expand the level of their competence in this area. It is advisable for patients to post information in an accessible form on the websites and information stands of medical organizations, as well as to strengthen the coverage of issues related to the provision of HTMC in the media and on the Internet.

## Bibliography

1. Alimzhanovich, R. J., Arifovich, S. M., & Khasanjanova, F. O. (2023). Assessment of the dynamics of morbidity and mortality from cardiovascular diseases in the republic of Uzbekistan. *World Bulletin of Public Health*, 21, 133-137.
2. Alimzhanovich, R. J., Arifovich, S. M., & Khasanjanova, F. O. (2023). Complex evaluation of high technological medical care for cardiologic patients and respect for these care products in the population of the Samarkand region (LITERARY REVIEW). *World Bulletin of Public Health*, 19, 225-229.
3. Khasanjanova, F. O., and Rofeev M. Sh. "Common risk factors for myocardial infarction in young men with different outcomes of the disease." *Actual scientific research in the modern world* 10-7 (2019): 87-90.
4. Khasanjanova, F. O. "Differences in the frequency of development of the main complications in patients with acute myocardial infarction." *Actual scientific research in the modern world* 10-6 (2018): 39-41.
5. Rizaev Jasur Alimzhanovich, Saidov Maksud Arifovich, & Farida Odylovna Khasanjanova. (2023). The role of high-tech medical care in the health care system (REVIEW ARTICLE). *World Bulletin of Public Health*, 21, 138-143. Retrieved from <https://scholarexpress.net/index.php/wbph/article/view/2544>
6. Tajiyev, Tursunpulat Ismoilovich, and Farida Odilovna Xasanjanova. "BO 'LMACHALAR FIBRILLYATSIYASINI SHOSHILINCH DAVOLASH STRATEGIYASI VA TAKTIKASI: MUAMMONING ZAMONAVIY KO 'RINISHI." *Research and education* 2.1 (2023): 253-260.



7. Агабабян, И. Р., Саидов, М. А., & Жониев, С. Ш. (2022). Yurak ishemik kasalligi bo'lgan keksa yoshdagi bemorlarni yuqori texnologik usullar bilan davolash. Журнал кардиореспираторных исследований, 3(4).
8. Агабабян, И. Р., Саидов, М. А., & Жониев, С. Ш. (2022). Лечение больных с ишемической болезнью сердца пожилого и старческого возраста с помощью высокотехнологических методов. Journal of cardiorespiratory research, 1(4), 38-42.
9. Белостоцкий А.В., Гришина Н.К. Доступность и качество высокотехнологичной медицинской помощи: многоуровневый анализ в системе "врач-пациент". Вопросы питания. 2010;79 (6):76-80.
10. Глухова Г.А. Состояние и проблемы развития высокотехнологичной медицинской помощи в Российской Федерации. Вопросы экономики и управления для руководителей здравоохранения. 2011; 7:21–28
11. Журавлева К.И. Статистика в здравоохранении. М.: Медицина;1981.176 с.
12. Кудряшова Л.В., Олейникова В.С. Информированность жителей города Москвы о порядке оказания высокотехнологичной медицинской помощи. Бюллетень Национального научно-исследовательского института общественного здоровья имени Н.А. Семашко. 2019; 2:38-47 doi: 10.25742/NRIPH.2019.02.006.
13. Матлубов, М. М., Юсупов, Ж. Т., Жониев, С. Ш., Саидов, М. А., & Маллаев, И. У. (2022). Yurakda o'tkazilgan operatsiyalardan keyingi kognitiv disfunktsiyaning rivojlanishida sun'iy qon aylanishning o'rni. Журнал кардиореспираторных исследований, 3(4).
14. Матлубов, М. М., Юсупов, Ж. Т., Саидов, М. А., Жониев, С. Ш., & Маллаев, И. У. (2022). Роль искусственного кровообращения в развитии послеоперационной когнитивной дисфункции. Journal of cardiorespiratory research, 1(4), 15-20.
15. Набережная И.Б., Захаров Д.А., Набережная Ж.Б., Сурхаева Э.Н. Социологический опрос пациентов, получивших высокотехнологичную медицинскую помощь. Журнал научных статей «Здоровье и образование в XXI веке». 2016;18 (3):56-59.
16. Набережная И.Б., Набережная Ж.Б., Захаров Д.А., Сурхаева Э.Н. Анализ информированности врачей о высокотехнологичной медицинской помощи. Журнал научных статей «Здоровье и образование в XXI веке». 2016;18 (1):201-204.
17. Одиловна, Хасанджанова Фариди, Самадова Нигина Алишеровна, Болтакулова Сарвиноз Дильшодовна. «Роль гена il-1b 3953 с/т в развитии вариантов нестабильной стенокардии у мужчин молодого возраста в условиях скорой медицинской помощи». Web of Scientist: Международный научный исследовательский журнал 3.02 (2022): 362-367.
18. Перхов В.И. Современные аспекты обеспечения населения РФ высокотехнологичной медицинской помощью. Здравоохранение. 2010; 2:29-38.
19. Перхов В.И., Юркин Ю.Ю., Горин С.Г. Актуальные проблемы организации высокотехнологичной медицинской помощи. Здравоохранение. 2015; 11:26-33.
20. Подзолков, В. П., Данилов, Т. Ю., Сабиров, Б. Н., Землянская, И. В., & Саидов, М. А. (2016). Успешная коррекция трехклапанного порока сердца у пациента в отдаленные сроки после радикальной коррекции тетрады Фалло. Бюллетень НЦССХ им. АН Бакулева РАМН. Сердечно-сосудистые заболевания, 17(5), 42-48.
21. Подзолков, В. П., Зеленикин, М. М., Юрлов, И. А., Ковалев, Д. В., Пурсанов, М. Г., Астраханцева, Т. О., & Саидов, М. А. (2015). Влияние дополнительного источника

- легочного кровотока при двунаправленном кавопульмональном анастомозе на результаты гемодинамической коррекции сложных врожденных пороков сердца. Грудная и сердечно-сосудистая хирургия, 57(2), 22-27.
22. Рассказова В.Н., Шевченко И.П., Вавилова В.О. Организация оказания высокотехнологичной медицинской помощи населению Приморского края. Тихоокеанский медицинский журнал. 2015; 1:76-79.
  23. Ризаев, Жасур Алимжанович, and Максуд Арифович Саидов. "СОВРЕМЕННЫЕ ТЕНДЕНЦИИ РАСПРОСТРАНЕННОСТИ И ИСХОДА СЕРДЕЧНО-СОСУДИСТЫХ ЗАБОЛЕВАНИЙ СРЕДИ НАСЕЛЕНИЯ РЕСПУБЛИКИ УЗБЕКИСТАН." *Журнал кардиореспираторных исследований* 4.1 (2023).
  24. Сыроед Н.С., Бакушкина Н.Е. Опыт социологического изучения представлений населения Приморского края о высокотехнологичной медицинской помощи. Общество: социология, психология, педагогика. 2019; 6:37-42.
  25. Сыроед Н.С., Бунькина Н.Е. Социологические исследования основных проблемных аспектов оказания высокотехнологичной медицинской помощи в российских регионах. Теория и практика общественного развития. 2017; 2:16-19
  26. Улумбекова Г.Э. О доступности высокотехнологичной медицинской помощи в России. Заместитель главного врача. 2015;3 (106):6-15.
  27. ФО Хасанжанова, МА Саидов, ХШ Низамов, ТШ Юсупов. Эффективность Тромболической Терапии У Больных С Острым Коронарным Синдромом С Подъемом Сегмента У Лиц В Молодом Возрасте. *Центрально-Азиатский Журнал Медицины и Естествознания*, 4 (2), 632-636. <https://doi.org/10.17605/OSF.IO/GNQ8A>
  28. Хасанджанова Ф.О., Саидов М.А., Низамов Х.Ш., Абдивалиев Б.К. (2023). РАСПРОСТРАНЕННОСТЬ НАРУШЕНИЙ РИТМА СЕРДЦА В ОСТРОМ ПЕРИОДЕ ИНФАРКА МИОКАРДА ПО ЭХОКАРДИОГРАФИЧЕСКИМ ДАННЫМ. *Всемирный бюллетень общественного здравоохранения*, 23 , 32-35.
  29. Хамидов, И. Н., & Саидов, М. А. (2023). Случай Рча При Множественной Форме Синдрома Вольфа-Паркинсона-Уайта. *Periodica Journal of Modern Philosophy, Social Sciences and Humanities*, 17, 141-149.
  30. Хасанджанова Ф.О., Абдухаликов А.А., Саидов М.А., Низамов Х. Ш., Рахматуллаев А.А. Клиническое состояние больных нестабильной стенокардией и хронической сердечной недостаточностью с нормальной фракцией выброса // Учебная : Журнал естественно-медицинского образования: Вып. 2 № 5 (2023): Scholastic: Journal of Natural and Medical Education.
  31. Хасанджанова Ф.О., Саидов М.А., Махмудов А.Х., Рузиева А.А., Низамова Н.Г. Современные аспекты нарушений ритма сердца у мужчин молодого возраста с острым инфарктом миокарда по данным эхокардиографии. *Международный бюллетень медицинских наук и клинических исследований*. 2023/5/3. Стр. 25-27.
  32. Хасанджанова Ф.О., Саидов М.А., Низамов Х. Ш., Нурмуратов А.К., Рузиева А.А., Оценка частоты сердечных аритмий и показателей реполяризации желудочков у больных с гипертоническим кризом, Учебная: Журнал естественно-медицинского образования: Вып. 2 № 5 (2023): Scholastic: Journal of Natural and Medical Education.
  33. Хасанджанова Ф.О., Саидов М.А., Низамов Х.Ш., Нурмуратов А.К., Рузиева А.А. Оценка частоты нарушений ритма сердца и показателей реполяризации желудочков у больных с гипертоническим кризом. *Scholastic: Journal of Natural and Medical Education*, 2 (5), 152–156.



34. Хасанжанова, Ф. О., Ташкенбаева, Э. Н., Ашрапов, Х. А., Мирзаев, Р. З., Суннатова, Г. И., & Мухтаров, С. Н. (2018). Изменение маркеров некроза кардиомиоцитов у больных с инфарктом миокарда в зависимости от возраста. Материалы IV Съезда ассоциации врачей экстренной медицинский помощи Узбекистана. Ташкент, 13-14.
35. Хасанжанова, Фарида Одыловна, Улугбек Азимжон Угли Мардонов, and Тохиржон Шомирза Угли Юсупов. "Факторы, неблагоприятно влияющие на исход лечения больных с острым коронарным синдромом в молодом и пожилом возрасте." *Проблемы современной науки и образования* 11-1 (144) (2019): 94-97.