

Accreditation Council
Eurasian Accreditation Center
and quality assurance
education and health

**REPORT
OF THE EXTERNAL EXPERT COMMISSION
ON THE RESULTS OF EVALUATION OF THE EDUCATIONAL
PROGRAMME "CARDIAC SURGERY, INCLUDING CHILDREN'S"
JSC "NATIONAL SCIENTIFIC CENTER OF SURGERY
NAMED AFTER A.N. SYZGANOV "IN COMPLIANCE WITH STANDARDS
FOR ACCREDITATION OF POSTGRADUATE EDUCATION PROGRAMMES
(RESIDENCE SPECIALTIES) OF MEDICAL EDUCATION ORGANIZATIONS**

period of external expert evaluation: 19.05.-21.05.2021

Almaty, 2021

CONTENT

	List of symbols and abbreviations	2
1.	EEC composition	3
2.	General part of the final report of the EEC	5
2.1	Representation of JSC "National Scientific Center of Surgery named after A.N. Syzganov "(NSCS) and the educational residency programme in the specialty "Cardiac surgery, including children's"	5
2.2	Information about previous accreditation	6
2.3	Analysis of the self-assessment report of the educational residency programme in the specialty "Cardiac surgery, including children's "	7
3.	Description of the stages of external expert evaluation and conclusion	8
4.	Analysis for compliance with accreditation standards based on the results of an external assessment and an educational residency programme in the specialty "Cardiac surgery, including " of NSCS and an overview of the strengths for each standard	18
5.	Recommendations for improving the educational programme of residency in the specialty "Cardiac surgery, including children's " of NSCS	28
6.	Recommendation to the ECAQA Accreditation Council	28
	Attachment 1. Quality profile and criteria for external evaluation of the educational programme of residency in the specialty "Cardiac surgery, including children's" of NSCS for compliance with ECAQA Accreditation Standards	29
	Attachment 2. List of documents studied by members of the EEC in the framework of specialized accreditation	29
	Attachment 3. List of residents of JSC "NSCS named after A.N. Syzganov " 2020-2021 academic year	31
	Attachment 4. List of teaching staff of JSC "NSCS named after A.N.Syzganov "	32

LIST OF SYMBOLS AND ABBREVIATIONS:

Abbreviations and symbols	Full name of the given designations and abbreviations
ISO	International Organization for Standardization
MoH RK	Ministry of Health of the Republic of Kazakhstan
MES RK	Ministry of Education and Science of the Republic of Kazakhstan
NSCS	National Scientific Center for Surgery named after A.N.Syzganov
SCES	State compulsory educational standard
ECAQA	Eurasian Center for Accreditation and Quality Assurance in Higher Education and Health care
QMS	Quality Management System
ISM	Integrated system management
CBD	Chairperson of the Board of Directors
CB	Chairperson of the Board
DCBSCIA	Deputy Chairperson of the Board for Scientific, Clinical and Innovation Activities
DP	Documented procedure.
PM	Process map
IL	Instruction letter
WEP	Working educational programme
WC	Working curriculum
TEP	Typical educational programme
TC	Typical curriculum
EMC	educational and methodological complex
CED	Catalog of elective disciplines
EMCD	Educational-methodical complex of the discipline
EMC	Educational and methodical council
SC	Scientific Council
DPE	Department of Postgraduate Education
EP	Educational programme
PGE	Postgraduate education
TC	Testing center
PPD	Public Procurement Department
FEO	Financial and economic department
HRDD	Human Resources Development Department
CA	Corrective action
PA	Preventive action
PO	Process owner
ITS	Information Technology Service
EB	Examination Board
SEC	State Examination Commission
EP	Educational programme
ERP	Educational residency programs

1. Composition of the External Expert Commission

In accordance with ECAQA Order No. 17 dated April 21, 2021, an External Expert Commission was formed to conduct institutional accreditation and accreditation of educational programmes for residency specialties of the NSCS in the period May 19-21, 2021, in the following composition:



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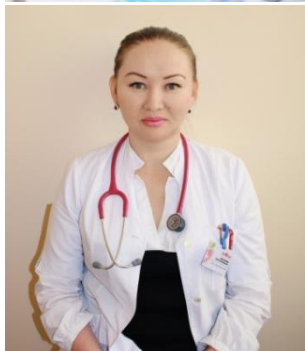
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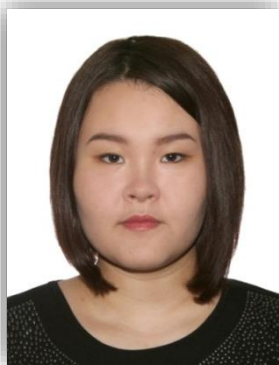
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The work of the EEC was carried out in accordance with the Regulations on the EEC (Order of the ECAQA Director general No. 4 dated February 13, 2017).

The EEC report contains an assessment of the educational programme of residency in the specialty "Cardiac surgery, including children's " of NSCS for compliance with Accreditation Standards of ECAQA for postgraduate education programmes of medical educational institutions, recommendations of the EEC on further improving the educational activities of the NSCS in the field of postgraduate education.

2. General part of the final report of the EEC

2.1 Presentation of JSC "National Scientific Center for Surgery named after A.N. Syzganov "(NSCS) and the educational residency programme in the specialty "Cardiac surgery, including children's"

National Scientific Center for Surgery named after A.N. Syzganov was founded in April 1945 on the basis of a hospital for veterans and invalids of the 2nd World War and, among the first research institutions, became part of the Academy of Sciences of the Kazakh SSR. Its founder and first director (until 1975) was a prominent scientist, talented surgeon, Honored Scientist of the Kazakh SSR, Academician of the Academy of Sciences of the KazSSR A.N. Syzganov. By the Resolution of the Cabinet of Ministers of the Republic of Kazakhstan No. 671 dated June 17, 1994, the Center was renamed into the Scientific Center of Surgery named after A.N. Syzganov MoH RK.

By the Resolution of the Government of the Republic of Kazakhstan dated June 28, 2010 No. 658 Republican State Enterprise on the right of economic management "National Scientific Center for Surgery named after A.N. Syzganov" was reorganized into the Joint Stock Company" National Scientific Center of Surgery named after A.N. Syzganov "(hereinafter - NSCS) with one hundred percent participation of the state in its authorized capital.

The center applies the principles and mechanisms of effective corporate governance, an integrated management system is in place, the requirements of ST RK ISO 9001-2009 (ISO 9001: 2008) have been introduced, an external assessment of the conformity of certified management subsystems is carried out in accordance with the established procedure, it is planned to introduce ST RK ISO 15189-2015.

The governing body is the Board of Directors. It includes: a representative of a shareholder, a representative of an authorized body (owner), and more than 30% of its members are independent directors. The executive body is collegial, the Management Board of the Company.

NSCS is located in Almaty, occupies 2 buildings with a total area of 18,484.80 square meters by 1.98 hectares. The number of staff at the Center is 727.5 units:

The NSCS has 10 clinical departments, a day hospital, a diagnostic center with paraclinical services and an operating unit. The bed fund is 206 beds, including Department of Cardiac Surgery, which provides specialized and highly specialized medical care to patients with cardiac surgery pathology from all regions of Kazakhstan. The Department of Cardiac Surgery and Heart

Transplantation is deployed for 24 beds, of which 14 for the profile of ischemic disease and acquired heart defects, 1 for heart transplantation and 9 for congenital heart defects.

The history of educational activities for the training of personnel of the NSCS named after A.N. Syzganov begins with the founding of the Center. Over the years of its development, NSCS named after A.N. Syzganov became one of the leaders of the system of postgraduate medical education for the preparation of a new generation of competitive specialists in the field of health care, the leading scientific and clinical center of the Republic of Kazakhstan, operating in accordance with national and international standards of quality and safety based on the integration of education, science, practice and innovative approaches in the interests of the individual, society, state.

Management of educational activities was implemented through collegial bodies: Academic Council, Dissertation Council, Council for Assigning a Category to Specialists, Educational and Methodological Council and the Department of Postgraduate Education.

In 2012, NSCS received a license for educational activities in the specialty of residency "Cardiac surgery, including children's". The license was issued to engage in educational activities in the field of postgraduate education (without time limit) No. 12018231 dated November 21, 2012. Attachment to the state license No. 001 (order of the Committee for Control in the Sphere of Education and Science of the Ministry of Education and Science of the Republic of Kazakhstan No. 1543 dated November 21, 2012). Institutional Accreditation Certificate. State license of the Ministry of Education and Science of the Republic of Kazakhstan No. 12018231 dated November 21, 2012. Certificate of specialized accreditation. State license of the Ministry of Education and Science of the Republic of Kazakhstan No. 12018231 dated November 21, 2012 Educational programmes.

In 2021, the NSCS successfully passed the state accreditation of the Ministry of Education and Science of the Republic of Kazakhstan for the right to conduct research work at the expense of the state budget for a period of 5 years (No.000047 dated February 25, 2021, Ministry of Education and Science of the Republic of Kazakhstan). The first in the city of Almaty to successfully pass the state accreditation of the Ministry of Education and Science of the Republic of Kazakhstan for the right to conduct clinical trials of drugs, medical devices and medical technologies for a period of 5 years.

Every year, educational activities are achieved by 100% (employment and passing tests the first time).

For the implementation of educational programmes of additional vocational education (advanced training and retraining of doctors) and training in residency, in order to control the conduct of educational, methodological and organizational work in the field of education, in August 2014, the Educational and Methodological Council was opened to review and approve the educational and methodological documentation of the postgraduate education sector (Order No. 262-p of 08/09/2013).

The center's library provides remote access via the Internet to world electronic resources, catalogs of leading foreign centers, universities and publishing houses. The volume of the book and magazine fund of the library is 21658 copies, of which electronic publications - 26, medical literature 9329 copies, which is 43.1% of the book fund, of which 40 copies are in the state language, 2880 medical journals, from them in the state language - 56.

Total number of students in residency NSCS in 2019-2020 years is 24 residents, including in the specialty "Cardiac surgery, including children's" 5 people. In 2019 and in 2020 issue of 33 residents was carried out, issue of residents in the specialty " Cardiac surgery, including children's" did not have. In 2020 have graduated 29 residents, of them in the specialty "Cardiac surgery, including children's". 2 residents were graduated.

The total number of teachers involved in the educational process of the residency is 55 teaching staff, in cardiac surgery and additional professional training is 5 people, among them Doctor of Medical Sciences-1, Candidate of Medical Sciences - 2, with the first category-2... Number of teaching staff under the residency programme "Cardiac surgery, including children's" - five.

Thus, NSCS named after A.N. Syzganov is an innovation-oriented and socially responsible scientific center, a leader in the Republic of Kazakhstan in the multi-level training of competitive health care professionals in the field of surgery through the implementation of a competency-based model of

medical education with the wide involvement of domestic and foreign scientists and a constant increase in scientific potential.

2.2 Information on previous accreditation

Accreditation of the educational residency programme in the specialty "Cardiac surgery, including children's « of NSCS was held in 2016.

2.3 Analysis of the self-assessment report of the study programme of residency in the specialty "Cardiac surgery, including children's"

Preparation for specialized accreditation of the NSCS was carried out on the basis of the order of 2021 No. "On approval of the composition of the working group for the preparation for institutional and specialized accreditation of the NSC".

Self-assessment report educational programme presented on 147 pages of the main text, of which 9 pages of annexes and electronic versions of documents by reference to googledisk on the electronic platform of the site- <https://nnch.kz...>

The report is characterized by responses to the criteria of 9 accreditation standards, structuredness taking into account the recommendations of the ECAQA Self-Assessment Guidelines, as well as internal consistency of information. The report is accompanied by a cover letter signed by the chairperson of the board of NSCS, Acad. Baimakhanova B.B., confirming the accuracy of the information and data contained in the report. The report contains information about the representative of the NSCS, who is responsible for the self-assessment of educational programmes: Chormanov Almat Tursynzhanovich - Deputy Chairperson of the Board for Scientific, Clinical and Innovative Activity of the National Scientific Center of Chemistry.

Working group in the amount of 9 a person headed by the chairperson Chormanov A.T. Some work was done to prepare the self-assessment report: the content of the accredited educational programme, the conditions for its implementation, staffing, educational resources, dynamics of development since the date of the previous accreditation in 2012 were analyzed. the necessary information has been collected in accordance with the Standards of accreditation of postgraduate education programmes (specialty residency) of medical educational institutions of ECAQA (hereinafter referred to as accreditation standards); a thorough analysis, updating and addition of methodological and educational materials was carried out, their content is reflected in the report. The content of the Self-Assessment Report is structured in accordance with the ECAQA Accreditation Standards and includes a description of the strengths, areas for improvement for each of the 9 standards.

All standards show actual practice NSCS for training residents in the specialty "Cardiac surgery, including children's ", taking into account the beginning of the admission of students in 2018 and 2019, reasoned data, examples of the implementation of the tasks of the educational programme, national and international events, methodological support, confirming compliance with the requirements of accreditation standards. On the self-assessment report description fairly completed and updated in terms of the number of residents, teachers, administration, information on the selection and admission, the results of training, the results of the assessment of knowledge and skills, the material and technical base of the university and clinical bases, contractual obligations with partners (universities, associations, bases), financial information, development plans and improvement, etc

The expert group notes that the self-assessment report reflected the activities of the NCH in accordance with the standards and criteria of educational accreditation, as evidence base provided voluminous digital and factual material both in the report and in the appendices. The self-assessment report contains a large amount of information, with an analysis of all areas of activity of the NCH and its structural units in accordance with the standards of specialized and institutional accreditation, analysis, identification of strengths and weaknesses, threats and opportunities for further development.

Conclusion on each of the 9 accreditation standards includes a description of the strengths and areas for improvement identified in the course of introspection and development prospects for the specialty.

Thus, the self-assessment report of the accredited educational residency programme of the NSCS contains objective, detailed, structured information on all types of activities in accordance with the ECAQA accreditation standards.

3. Description of external expert evaluation

External expert work on the evaluation of the educational programme residency in the specialty "Cardiac surgery, including children's "was organized in accordance with the Guidelines for conducting an external assessment of educational organizations and educational programmes of ECAQA (approved by order of the Director General of the NU "Eurasian Center for Accreditation and Quality Assurance in Education and Health care" No. 5 dated February 17, 2017) and according to the programme and schedule approved on May 11 .2021 Director General of ECAQA Sarsenbayeva S.S. and agreed by the Chairperson of the Board of NSCS, acad. Baimakhanov B.B.

To obtain objective information on the expert assessment of the accredited educational programme, the members of the EEC used the following methods: interviews with management and administrative staff, interviews with residents, observation, study of the website, interviewing employees of various structural units, teachers, questioning teachers and residents, review of resources in the context of the implementation of accreditation standards, the study of regulatory and educational-methodological documents both before the visit to the NSCS and during the visit.

The NSCS staff ensured the presence of all persons indicated in the visit programme and according to the lists of interview sites (Table 1). Interviews of experts were conducted with employers, graduates, resident students, teaching staff, employees of the postgraduate education department (PDE), organizational and economic department.

Table 1 - Information on the number and category of participants in meetings, interviews, interviews with members of the EEC.

N o.	FULL NAME.	Status	Position	Place of work
1.	Ramazanov Manas Embergenovich	Employer - Radiation Diagnostics	Chief physician	City Clinical Hospital No. 7, Almaty
2.	Kerimkulov Bakhtiyar Bakhtybaevich	Employer - radiation diagnostics	Head of LD department	MC "Sunkar", Almaty
3.	Esaliy Nurbol Seitbekovich	Employer Cardiac Surgeon	Head of department	Taldykorgan cardio center
4.	Minaydarov Nurlan Sabitovich	Employer cardiac surgeon (CH)	Head of department	Multidisciplinary regional hospital in Kokshetau
5.	Espenbetov Esenay Bakhytzhonovich	Employer - Anesthesiology and Reanimatology (A&R)	Head of department	City Clinical Hospital No. 7, Almaty
6.	Arynov Ardak Akhanovich	A&R employer	Head of department	JSC "KazNIOiR"
7.	Zakarya Akmaral Muratbekovna	Graduate 2019 LD	CT doctor	City Clinical Hospital No. 7, Almaty
8.	Aytbay Gaukhar Samatovna	Graduate 2016 LD	CT and MRI doctor	MC "Sunkar", Almaty
9.	Turamanov Amirzhan	Graduate 2020 KX	Cardiac surgeon	Taldykorgan cardio center

10.	Aliyev Erbolat	Graduate 2020 KX	Cardiac surgeon	Multidisciplinary regional hospital in Kokshetau
11.	Dostarbayev Bagdat Zhakhanovich	2014 A&R graduate	A&R doctor	NSCS named after A.N. Syzganov
12.	Uvalieva Sabina Maratovna	2016 A&R graduate	A&R doctor	City cardio center in Almaty
13.	Baiguisova Dinara Zulkarnaevna	Curator LD	Head of department	NSCS named after A.N. Syzganov
14.	Sagatov Inkar Ergalievich	Curator of KH	Head of R&D Management Department, Doctor of Medical Sciences	NSCS named after A.N. Syzganov
15.	Mutagirov Vladimir Vladimirovich	Curator of A&R	Doctor of the Department of A&R	NSCS named after A.N. Syzganov
16.	Chormanov Almat Tursynzhanovich	Department of PGE	Deputy Chairperson of the Board for Scientific, Clinical and Innovation Activities	NSCS named after A.N. Syzganov
17.	Aubakirova Aigul Toktasynovna	Department of PGE	Scientific Secretary	NSCS named after A.N. Syzganov
18.	Smailova Amal Zhumagazievna	Department of PGE	Head of the Department of Postgraduate Education	NSCS named after A.N. Syzganov
19.	Nikbaev Bakhytzhon Burkitbaevich	Human Resources Department	Head of HR and Legal Department	NSCS named after A.N. Syzganov
20.	Shunkebaeva Indira Satarkulovna	Human Resources Department	Acting Senior Inspector	NSCS named after A.N. Syzganov
21.	Tungatov Kairat Khasipovich	Economists	Deputy Chairperson of the Board for Strategic and Financial and Economic Affairs	NSCS named after A.N. Syzganov
22.	Madisheva Madina	Economists	Head economist	NSCS named after A.N. Syzganov

The sequence of the visit during May 19-21, 2021 is detailed in the Visit Programme, which is located in the documentation of the accreditation center and in the annex to this report.

An external visit of the expert group within the framework of the institutional and specialized accreditation procedure at the JSC "Scientific Center for Surgery named after A.N.Syzganov" took place from May 19 to May 21, 2021.

The external audit took place in accordance with the programme developed by ECAQA... All materials necessary for work (visit programme, self-assessment report of educational programmes of the Scientific Center for Surgery named after A.N.Syzganov (hereinafter NSCS) in Russian and Kazakh languages, guidelines for organizing and conducting an external visit (audit) for institutional and specialized (programme) procedures accreditations were presented to the members of the expert group prior to the visit to the NCH, which provided an opportunity for preliminary preparation for the external evaluation procedure.

The meeting with the leadership of the Center made it possible for a group of experts to get acquainted with the general characteristics of the NSC, achievements in recent years and development prospects.

The programme for the external visit of the expert group contributed to a more detailed acquaintance with the structural units of the NSC, its material and technical base, employees and teaching staff, residency students, graduates, employers and allowed external experts to conduct a high-quality and independent assessment of the compliance of the data presented in the self-assessment report within the framework of institutional and specialized accreditation of the actual state of affairs.

On May 19-21, 2021, a series of interviews took place with the chairperson of the NSCS JSC, deputy chairperson for scientific and clinical work, head of scientific work, heads of residency and postgraduate education, heads of administrative and financial work, HR department; heads of departments, students of residency, teaching staff, graduates of residency and employers.

Employment of trainees of residency in cardiac surgery -100%. The experience and authority of the NSCS in the field of postgraduate and additional education shows the demand for graduates and educational programmes of continuous professional development (CPD) by medical organizations in all regions of Kazakhstan.

Interviews with teachers, as providers of the residency programme, showed that there are both successes and problems in the management of the educational programme, since the main developer of programmes and educational and methodological documentation is **postgraduate education department** and trainers are more involved in resident hands-on training and mentoring. In order to verify the data of Standard 5, external experts obtained an opinion on personnel policy and approaches to the development of pedagogical competence of teachers, motivation for working with residents, and mentoring. The experts found that teachers initiate research topics for residents, stimulate the need for additional training and independent work with literature and medical documentation. In 2017-2019, the Department of Cardiac Surgery and Heart Transplantation, together with the Department of Arrhythmology, Interventional Cardiology and X-ray Surgery, participated in a scientific and technical programme within the framework of the PCF of the Ministry of Health of the Republic of Kazakhstan on the topic: "New molecular genetic methods of pre-symptomatic diagnostics and methods of treatment of a number of significant diseases" which performed a fragment on the topic: "Development of a protocol for a personalized approach in the treatment of complex forms of atrial fibrillation." This research study noted the participation of residents. During interviews with the teaching staff, it was also noted that residents have access to scientific international platforms, work with prospective and retrospective data of the Center's patients and, based on the results of research work, together with the teaching staff, publish articles in domestic and international publications. Most of the residents are fluent in English. However, it should be noted that the indicator of the number of publications is low and it is necessary to motivate and activate residents to publish their works (over the past 5 years, 8 reports and 6 publications).

In order to validate the performance of the self-assessment report data and obtain evidence of the quality of the programmes, interviews were conducted with 10 residents, 3 cadets, 2 residency graduates on the zoom platform and online. The experts asked questions about satisfaction with training at the NSCS, the sufficiency of time for supervising patients, work in Damumed with medical documentation, satisfaction with teaching methods and qualifications of teachers, social and moral support for residents in need of this, the availability of international databases of professional literature as a resource. Residents are members of the Council of Young Scientists of the Center. In general, residents and cadets are satisfied with the training, assessment methods, and purposefully entered this organization, since they believe that the NSCS has good educational resources, image and international connections.

Residents showed their commitment to the organization of education, were active in answering questions from external experts, demonstrated their opinions on organizing training, assessing their skills, consulting support, opportunities to participate in research and development, funding, demonstrated erudition and knowledge in the field of cardiac surgery when answering questions from a foreign expert prof. A.S. Rudoy. The experts studied the documents of residents (portfolio, results of assessment of residents-checklists, results of a questionnaire survey of residents).

Interviews with 4 employers on all NSCS residency study programmes announced for accreditation were conducted online and included such questions as: knowledge of the university

mission, participation in the development of the mission and proposals in the strategic plan, participation in the work of NSC advisory bodies, satisfaction with basic knowledge and skills residents, participation in the training of residents through mentoring, providing the department and residents with the necessary resources for practical training and the formation of clinical thinking, about the problems of interaction with departments and universities in general, 100% employment of residency graduates. Employers gave an objective assessment of the preparation of residents and recommendations of a recommendatory nature.

Experts visited: block of radiation diagnostics, block of cardiac surgery and transplantation, clinical diagnostic laboratory; Department of Angiosurgery and X-ray Vascular Surgery; departments of the hepato-biliary area; Department of General Surgery and Hand Surgery; clinical diagnostic department; intensive care unit; endoscopy sector; lecture and classrooms; food outlets, simulation room, magazine editorial office, library, postgraduate education department and resident group classes.

The experts got acquainted with the internal regulatory and reporting documentation on the organization of educational activities and the effectiveness of the implementation of educational programmes, portfolios of residents and the teaching staff questionnaire.

The review of resources showed that the clinical base of the NSCS, available for review at the time of the external visit, corresponds to the goals and objectives of the clinic, a sufficient number of thematic patients, modern equipment and demonstrates accessibility to students, and employees who simultaneously perform the roles of teachers and curators (mentors) provide high-quality teaching in accordance with ethics and deontology. Before the start of the corresponding discipline of the educational programme, the resident receives a syllabus from the teacher and knows what skills he must acquire and develop during training.

The experts studied the documentation on the educational programme "Cardiac surgery, including children's" at the link <https://nnch.kz...>, which confirmed the compliance with accreditation standards, including documentation of teachers and resident mentors and at the request of EEC members. However, it takes place that on Center website educational and methodological material for residents is presented in 2 languages (state, Russian) and no in english.

The experts were presented with the implementation of the competence-oriented model of the graduates of the National Scientific Center of Surgery in the specialty "Cardiac surgery, including children's". There is a clear formation of the goals of educational programmes in the specialty "Cardiac surgery, including children's". Residents participate in the formation of individual training programmes through an elective component and in the provision of highly specialized medical care to patients. The resident's portfolio allows assessing the development of the resident's competencies: personal interest, professional competence, communicative, personal qualities. The personal files of the teaching staff participating in the educational programme showed that the qualifications of the teaching staff correspond to the regulation on teaching staff. The teaching staff is actively involved in attracting residents to the implementation of scientific and clinical activities of residents. The quality of the control and measuring instruments is subject to a multi-stage check. The presence of a comprehensive, unified policy of admission and support of residents throughout the entire period of study, provided with sufficient resources (regulatory and legal framework, personnel, material, technical and financial support) It should be noted the active involvement of residents in the treatment and diagnostic process and good opportunities for their practical training, participation in the provision of highly specialized care. Constant access of residents to the provision of emergency and planned medical care to the population; implementation of the model of personal growth of residents (continuous self-improvement), a high percentage of employment of NSCS graduates (100%). a unified policy of admission and support of residents throughout the entire period of study, provided with sufficient resources (regulatory and legal framework, personnel, material, technical and financial support) It should be noted that residents are actively involved in the treatment and diagnostic process and good opportunities for their practical training, participation in providing highly specialized care. Constant access of residents to the provision of emergency and planned medical care to the population; implementation of the model of personal growth of residents (continuous self-improvement), a high percentage of employment of NSCS graduates (100%). a unified policy of admission and support of

residents throughout the entire period of study, provided with sufficient resources (regulatory and legal framework, personnel, material, technical and financial support) It should be noted that residents are actively involved in the treatment and diagnostic process and good opportunities for their practical training, participation in providing highly specialized care. Constant access of residents to the provision of emergency and planned medical care to the population; implementation of the model of personal growth of residents (continuous self-improvement), a high percentage of employment of NSCS graduates (100%). logistical and financial support) It should be noted the active involvement of residents in the treatment and diagnostic process and good opportunities for their practical training, participation in the provision of highly specialized care. Constant access of residents to the provision of emergency and planned medical care to the population; implementation of the model of personal growth of residents (continuous self-improvement), a high percentage of employment of NSCS graduates (100%). logistical and financial support) It should be noted the active involvement of residents in the treatment and diagnostic process and good opportunities for their practical training, participation in the provision of highly specialized care. Constant access of residents to the provision of emergency and planned medical care to the population; implementation of the model of personal growth of residents (continuous self-improvement), a high percentage of employment of NSCS graduates (100%).

Then a meeting of the EEC members took place following the results of the external evaluation. A final discussion of the results of external assessment, study of documents, results of interviews, interviews, questionnaires was held. The members of the EEC began to design the final report of the EEC.

A meeting of the EEC members was held. EEC members made generalizations of the results of the external evaluation. Experts have individually completed the "Quality profile and criteria for external evaluation of the educational residency programme in the specialty" Cardiac surgery, including children's" for compliance with ECAQA Accreditation Standards". No comments were made by the EEC members. Recommendations for improving the postgraduate education sector in general and the department implementing the accredited educational programme were discussed. A draft report with recommendations was prepared.

Chairperson of the EEC, Doctor of Medical Sciences Zhanteleeva L.A. a final open vote was held on recommendations to improve institutional performance and educational programme "Cardiac surgery, including children's" of NSC and final vote on recommendations for the ECAQA Accreditation Council. Then the Chairperson of the EEC for the management and employees of the educational organization announced recommendations based on the results of an external assessment in the framework of accreditation of educational programmes for residency specialties.

Results of the survey.

An observer from ECAQA on May 19-20, 2021 conducted an online survey of residents and teachers-mentors of the NSC on the resource [https://webanketa.com/...](https://webanketa.com/) which included 22 questions, allowing to draw conclusions about the attitude of respondents to the organization of the educational process and determine the existing problems.

Residents survey results:

The total number of responding residents - 19... Of these, 5 people are residents of the specialty "Cardiac surgery, including children's", 13 residents of the specialty "Anesthesiology and resuscitation, including children's" and 1 resident of the specialty "Radiation diagnostics".

According to the results of the survey, 26.3% of those who answered completely agree that they will recommend this institute as an educational organization, partially agree - 73.7%. 47.4% of residents fully agree with the statement that programme managers and teachers are aware of the problems associated with learning, and 52.6% partially agree.

Fully satisfied with the conditions and equipment of classrooms, auditoriums of this educational organization 26.3% of residents, partially - 73.7%. Fully agree that this educational organization has created conditions for rest and meals for students (lounges, benches / gazebos on the territory, canteen) in between classes, only 36.8% of respondents, and 63.2% - partially agree ...

We fully agree that office equipment (computers, laptops, printers) is available to listeners in classrooms and practice bases, 31.6% of those who answered, and 68.4% partially agree.

We fully agreed with the statement that teachers provide students with methodological and didactic materials, additional literature to prepare for classes, 73.7% of respondents, and 26.3% expressed partial agreement.

26.3% of residents are completely and 73.7% are partially satisfied with the library fund of the NSCS named after Syzganov. According to the survey results, access to electronic educational resources is fully satisfied by 31.6% of respondents and 68.4% - partially.

31.6% of respondents are fully satisfied with the organization of clinical training, and 68.4% - partially. The teaching methods are completely satisfied with 31.6% of residents, 57.9% are partially satisfied, and 10.5% are completely dissatisfied. We fully agree that there is sufficient time for practical training (supervision of patients, etc.), 78.9% of respondents, 10.5% expressed partial agreement and 10.5% - partial disagreement.

The schedule of training sessions is fully satisfied with 78.9% of respondents, 21.1% - partially. 89.5% of residents are fully satisfied with the methods of assessing knowledge and skills, and 10.5% - partially.

Of all the respondents, 68.4% answered that teachers regularly use active and interactive teaching methods in the classroom, 15.8% expressed the opinion that such teaching methods are used by teachers only occasionally, and the remaining 15.8% do not know what it is.

According to the survey results, 78.9% answered that after the end of the class, the teacher constantly conducts feedback with them, 5.3% believe that sometimes, and 15.8% answered that they have never encountered this.

68.4% of the respondents are fully satisfied with their education in this educational institution, and 31.6% are partially satisfied.

73.7% of residents are sure that this educational organization allows them to improve or acquire the necessary knowledge and skills in their chosen specialty, 15.8% are not sure about this, and the remaining 10.5% answered that they would like to believe in it. The majority of respondents (78.9%) are completely satisfied with the organization of teaching, while 15.8% answered that they were not satisfied.

A positive opinion on the work of the External Expert Commission on the accreditation of this educational organization was expressed by 84.2% of residents, 15.8% of respondents were generally satisfied.

The majority (89.5%) of respondents believe that the accreditation of an educational institution and educational programmes is an important and necessary mechanism for ensuring the quality of education in residency.

Conclusions: with their answers, residents expressed partial satisfaction with the conditions of training, equipment and library fund in the organization of education, while the majority are completely satisfied with the organization of teaching, the schedule of classes, methods of assessing knowledge and skills, training in this organization of education.

Results of a survey of residents in the specialty "Cardiac surgery, including children's":

The number of responding residents of the specialty "Cardiac surgery, including children's" - 5.

According to the results of the survey, 100% of the respondents partially agree that they will recommend this institute as an educational organization. All of the respondents agreed in part with the statement that programme managers and trainers are aware of the learning challenges.

All respondents of the specialty "Cardiac surgery, including children's" expressed partial satisfaction with the conditions and equipment of classrooms and auditoriums of this educational organization. We fully agree that this educational organization has created conditions for rest and meals for students (lounges, benches / gazebos on the territory, a canteen) in between classes, 20% of respondents, and 80% - partially agree.

The results of the questionnaire survey of the teachers of the NSCS named after Syzganov

On May 19, the ECAQA observer, as part of the external assessment programme, conducted a questionnaire survey, which included 22 questions, which made it possible to draw conclusions about the attitude of teachers to the organization of the educational process and identify existing problems.

The total number of teachers on the list is 25. The total number of respondents is 25, including those with up to 5 years of experience - 40%, up to 10 years - 28%, over 10 years - 32%.

Fully 88% are satisfied with the organization of the educational process, partially - 12%. According to the survey, 96% of teachers completely agree that the NSCS named after Syzganov, ethics and subordination are respected, the remaining 4% believe that it is partially. 72% of respondents are completely satisfied with the organization of work and workplace, partially - 20%, and 8% (2 people) did not give an answer. The organization has an opportunity for career growth and the development of competence for teachers: 84% fully agree, 16% partially.

The majority (96%) of the respondents fully agree that in this educational organization, teachers have the opportunity to engage in scientific work and publish the results of research, the remaining 4% agree in part. Fully satisfied with the salary of 68% of teachers, partially - 24%, completely dissatisfied - 8%.

84% of the respondents are fully satisfied with the work of the personnel department, 12% are partially satisfied, no answer is 4%.

40% of respondents underwent advanced training less than one year ago, 16% - within the last year, more than 3 years ago - 28%, more than 5 years ago - 4%, but three teachers (12%) answered that they did not remember when they improved their qualifications.

88% of respondents consider the microclimate in the team to be satisfactory, and 12% are quite satisfied with it. According to the survey results, 96% of teachers fully agree that they can be realized as professionals in this educational organization, and 4% agree in part.

Fully agree that the students of this educational organization have a high level of knowledge and practical skills after completing the training programme, 76% of the respondents, partially agree - 16%, partially disagree - 8%.

84% of the respondents consider the execution of applications for the purchase of methodological and didactic materials, office equipment, stationery to ensure the educational process in the organization timely, 4% consider the execution of applications untimely, and 12% answered that they had nothing to do with this. Regarding participation in conferences (international, republican), 68% answered that the educational organization supports the payment of travel, travel expenses, registration fees, 4% chose the answer option that includes only the payment of travel, 12% find sponsors, 4% did not apply for this to the management and 8% did not answer.

All respondents (100%) fully agree that residents have free access to patients and resources of the institute. The teachers answered that during the classes, they have syllabuses (84%), control and measuring instruments (76%), an educational journal (64%), cases (52%), monographs (36%), a register of workings (32%).

The level of previous training of residents upon admission to training programmes is fully satisfied by 60% of the respondents, partially - 24%, at the same time, 4% completely disagree with this, partially disagree - 12%.

40% know about the implementation of social programmes to support teachers, do not know about it and doubt the answer, 16% and 12%, respectively. Of all the respondents, 76% note that the organization's management listens to the opinion of teachers in relation to issues on the educational process, research and development, clinical work, 24% believe that sometimes.

When teaching residents, a variety of teaching methods are used, but more often the analysis of situational tasks (92%), oral analysis of the topic (92%), lectures (80%), oral questioning (68%), problem-oriented training (68%), interactive training (56%), completing abstracts (56%), solving tests (52%).

72% of the respondents fully agree that this survey will be useful for developing recommendations for improving the key areas of the organization's activities, 16% partially agree with this.

The results of the questionnaire are presented in the Attachment and, in general, demonstrate satisfaction with the educational process, the resources of the clinical base, the competencies of teachers, and also indicate the presence of a centralized management of educational programmes (Attachment 5.6).

conclusions: the survey showed the presence of a healthy microclimate in the organization, as well as the fact that the majority of the interviewed teachers are satisfied with the organization of the educational process, the attitude of the management to the teachers of the institute. At the same time, areas for improvement were identified: professional development of teachers in pedagogy, methods of teaching in residency.

Conclusion on the basis of the external evaluation:

Members of the EEC have carefully studied and evaluated the main indicators of the accredited educational programme. The information received by external experts during the study of the self-assessment report, preparation of a written review with recommendations for improvement, implementation of the activities of the visit programme was analyzed from 19 to 21 May 2021. All the information received was compared with the data of the self-assessment report, the information was validated for each criterion of the accreditation standards and the indicators of the Attachment to the self-assessment report were verified, which made it possible to ensure the reliability of the provided NSCS information and supporting documents for compliance with ECAQA Accreditation Standards.

Despite the fact that in the self-assessment report of the educational programme NSCS described his real educational practice in postgraduate education. Before visiting the organization by examining the attachments to the report provided by the postgraduate education department and access to googledisk. Experts reviewed about 21 documents, as well as during an external expert assessment by members of the EEC studied the main documents (mission, strategic plan for 2019-2023, teaching materials of disciplines, syllabuses, control and measuring instruments, checklists, portfolios of residents, questionnaires of teaching staff, journals of reports of the Academic Council, journals of LEC, individual plans of residents for the 2019-2020 academic year, publications teachers, the rules for admission to residency, personnel policy, the programme of the internal quality assurance system, resources for training were viewed directly at the clinical bases of departments (classrooms, office equipment available for residents to work with literature, patient documentation, educational and methodological literature), resources for residency on the website <https://nnch.kz/otdel-postdiplomnogo-obrazovaniya>, which made it possible to identify the compliance of the educational organization with the basic accreditation standards, at the same time, it is necessary to slightly improve the quality of tests, complicate testing issues, as well as train teaching staff in testology with the issuance of appropriate certificates.

During the external examination, it was found that the Rules for the training of medical personnel in residency were observed (order of the Minister of Health of the Republic of Kazakhstan dated September 18, 2018 No. KR DSM-16). The volume of the study load and treatment and prophylactic work by sections of the educational programme is determined by the individual work plan of the resident (clause 14) for one year and is monitored by monthly reports of the resident in an arbitrary form. The accounting of completed tasks is drawn up in the form of a portfolio according to the recommendations in the syllabus. Residents participate in the formation of individual training programmes through an optional component. The educational programme takes into account requests depending on changes in the labor market and the needs of the regions - flexibility of new education standards, providing for hours of optional components, the possibility of making additions and changes to the working curriculum;

The resident's portfolio allows you to assess the development of the resident's competencies: personal interest, professional competence, communicative, personal qualities and has

In connection with the new edition of order No. 647 On the approval of state compulsory standards and standard professional training programmes in medical and pharmaceutical specialties dated July 31, 2015 (as amended by the order of the Ministry of Health of the Republic of Kazakhstan

dated 02.21.No. KR DSM-12/2020 Chapter 2. Requirements for the content of cardiac surgery residency educational programmes with a focus on learning outcomes have been adapted.

In accordance with Article 222 of the Residency of Clause 4 of the Code of the Republic of Kazakhstan on People's Health and the Health care System No. 360-VI ZRK dated July 7, 2020, external experts studied the activities and conducted conversations with mentors of residents, and it was established that each resident was provided with a mentor. An online and offline evaluation of the seminar and practical training on cardiac surgery for 1st and 4th year residents of cardiac surgeons was carried out. Classes with residents are conducted in a standard format, there are elements of feedback in the class between the teacher and the student, there are elements of involving the resident in classes as an orator who is able to present the content of a given topic. The residents have shown that they have mastered the material of diagnostics and treatment, surgical tactics of patients with cardiac pathology,

Through interviews with teachers and interviews with students, it was possible to determine their direct participation in the development, evaluation of educational programmes, decision-making on a number of key issues in the choice of clinical sites, topics of electives, participation in the appeal commissions for the admission and evaluation of residents, the development of the content of individual plans of residents and choosing mentors. Residents are familiar with the format and content of the syllabus. Residents have the opportunity to participate in the research work of the Centers, for educational purposes, teaching staff is trained in describing clinical cases, writing publications and ways of publishing in international publications. Residents know how to work with international scientometric databases, 1 resident has a Hirsch index -1.

Recommendations for improving activities in the implementation of the educational residency programme in the specialty "Cardiac surgery, including children's" for compliance with the Accreditation Standards, developed by the EEC based on the results of an expert assessment, were presented at a meeting with the management on 05/21/2021.

The programme of the 3-day visit (May 19-21, 2021) of the external expert assessment of the EEC was completed in full. On the part of the NSCS staff, the participation of all persons indicated in the programme is ensured.

Thus, the external assessment and the visit of the EEC members made it possible to verify and validate the data of the self-assessment report of the residency programme in full in accordance with the Regulation on the External Expert Commission, the Guidelines for the external assessment of the medical organization ECAQA education.

For the work of the EEC, comfortable conditions were created, access to all necessary information and material resources of the accredited educational programme was organized. Experts note the high level of corporate culture and discipline of those responsible for the postgraduate education of the staff of the NSCS, employees of clinical departments, a high degree of openness of the team in providing information to members of the EEC.

4. Analysis for compliance with accreditation standards based on the results of an external assessment of the residency educational programme in the specialty "Cardiac surgery, including children's" and an overview of the strengths for each standard.

Standard 1: MISSION AND OUTCOMES

Determined that NSCS has a mission, implemented in accordance with the national and regional priorities of the education and health care system, clearly defining the purpose of the Center and its development strategy. The mission also includes an educational component, namely: "serving society, improving and preserving the health of the population of Kazakhstan, through the application of advanced traditions in surgery, science and education." The mission was drawn up in accordance with the current management system of the organization and the policy in the field of ensuring the quality of education, and was also reflected in Strategic plan for 2019-2023, approved by the minutes of the meeting of the Board of Directors No. 3 dated May 29, 2019. The mission has been repeatedly revised in connection with the update of the plan and new programme documents of the Republic of

Kazakhstan in the field of postgraduate education, health care and science <https://nnch.kz/strategicheskie-i-programmnye-dokumenty/strategicheskij-plan-ao-ntsh-im-an-Syzganov#>, which indicates that the NSCS constantly monitors all educational processes and new regulatory legal acts...

The mission, strategic goal and vision of NSCS are focused on a leadership position in the training of highly qualified personnel in the field of cardiac surgery, protection and improvement of the health of the population of the Republic of Kazakhstan.

The strategic plan of the NSCS was developed on the basis of the programme documents adopted in the Republic of Kazakhstan in the field of education and health care, it defines long-term priorities, operational action plans for the medium-term period.

There is no separate mission of the programme, but NSCS has determined the strategic goal of implementing the educational residency programme "Cardiac surgery, including children's": "in-depth training of a specialist capable of providing qualified and specialized medical care to a patient with cardiac and vascular pathology, in accordance with evidence-based medicine."

The NSCS strictly followed the requirements of the State Educational Standard of the Republic of Kazakhstan and the provisions of the TEP when developing the mandatory part of the educational programme, therefore it clearly formulates the competencies and skills that a resident will receive as a result of training. At the same time, the NSC has introduced elements of institutional autonomy, i.e. the center independently develops and implements residency programmes, compiles syllables, IUP, WC.

For the successful implementation of training, work is being carried out to inform residents about the structure and expected results of training. Residency studies are focused on practice, so clinical work is 75%, theoretical training is 10%, independent work is 15%.

Currently, 5 residents are studying in the NSCS residency in the specialty "*Cardiac surgery, including children's* «, however, taking into account the pandemic of coronavirus infection, the number of bases decreased to four: NSCS, Central City Clinical Hospital, City Clinical Hospital No. 7, State Center for Pediatric and Hygiene. In the same time, NSCH and clinics where residents practice have ISO and JCI (Joint Commission International) certificates, which itself implies a patient-oriented style of work. Residents participate in the process of evaluating the educational programme by expressing their opinions and wishes at the end of the course or mastering a specific discipline by questioning. Residents can send their suggestions and comments on the organization of the educational process directly to the postgraduate education department.

Experts have obtained evidence that the NSCC cooperates with more than 12 foreign scientific centers and university clinics, including organizations in Japan, South Korea, the Netherlands, Turkey, Great Britain, the Russian Federation, and the Republic of Belarus.

The NSCS has an approved Regulation on Medical Ethics and Deontology (2018), an Ethical Commission has been created, working on the basis of the Regulation (Order No. 65 p dated 02/01/2018).

Thus, during a visit to the NSCS, experts established compliance with the basic criteria of the accreditation standard: the presence of a mission, strategic objectives of the programme, participation in the development of the mission of stakeholders (employees, teachers, residents' assets), residents are informed about their final results from the first day of classes, provided with resources and a practice-oriented educational programme. The effectiveness of the educational programme is evidenced by 100% employment.

Strengths:

1. The NSCS has a mission implemented in accordance with the national and regional priorities of the education and health care system, clearly defining the purpose of the NSCS and its development strategy.;
2. Wide geography of international cooperation, ensuring the implementation of the educational programme based on the best world experience;
3. Strategy for innovative development and transfer of technologies for the provision of medical care to the regions of the Republic;

4. NSCS periodically analyzes the external and internal environment, in which he assesses his strengths and weaknesses, opportunities in the market and threats to its development.
5. The strategic plan of the Center corresponds to the chosen direction of activity and mission, supported by the policy in the field of quality assurance.
6. NSCS contributes to the educational and scientific development of the region and the country, takes into account the policy of the Ministry of Health of the Republic of Kazakhstan.

Conclusions of the EEC on the criteria. Out of 17 standards conform: completely -16, significantly -1.

Standard 1: completed

Standard 2: EDUCATIONAL PROGRAMMES

In order to improve the quality of educational activities, the NSCS has created an internal quality assurance system based on international standards and guidelines to ensure the quality of higher and postgraduate education in the European Higher Education Area (ESG). Every year, at the beginning of the academic year, each resident and teacher sign the "Code of honor of the teacher", "Code of honor of the resident" (<https://nnch.kz>).

The structure and content of working curricula correspond to the State Educational Standard RK 2019 specialties "Cardiac surgery, including children's". The discipline programmes are developed at the proper scientific and methodological level. The sequence of studying disciplines is built using a system of pre- and post-requisites. The educational programme (2019) in the specialty 7R01118- "Cardiac surgery, including children's", was developed on the basis of the State Educational Standard of the Republic of Kazakhstan 2019, approved by order of the Ministry of Health of the Republic of Kazakhstan No. 647 dated 04/18/2019

For the implementation of educational programmes of additional vocational education (advanced training and retraining of doctors) and training in residency, in order to control the conduct of educational, methodological and organizational work in the field of education, in August 2014, the Educational and Methodological Council was opened to review and approve the educational and methodological documentation of the postgraduate education sector (Order No. 262-p of 08/09/2013), where 10 modules for optional components were approved for 15 credits in cardiac surgery. The educational programme in the specialty "Cardiac surgery, including children's" was revised collectively and approved at the meeting (minutes of the meeting of the educational and methodological council No. 1 dated 03/01/2021), approved at the PGE meeting (No. 7 dated 03/09/2021), and the Scientific Council of the NSCS (No. 1 of March 29, 2021). When working with residents, training is carried out using the current Clinical Protocols for Diagnosis and Treatment, its own and borrowed implementations in clinical practice. Residents are required to participate (including on-line) in conferences and training seminars, symposia, trainings, master classes. The use of modern medical advances forms cognitive competencies, leading to the development of practical skills, and also contributes to the development of the need for the process of continuous professional development. The EP model for cardiac surgery corresponds to that developed at NSCH model of the competence of residents, including the involvement of the resident in the clinical and scientific-organizational work of the NSCS. The EP residency guarantees the integration of practice and theory, includes content,

In order to take into account the interests of employers in the development of educational programmes, workers of practical health care from other medical organizations take part in the formation of catalogs of elective disciplines. The collection of proposals for CED from employers is carried out on the basis of feedback, while taking into account the needs of residents.

The ability for constant professional growth of a resident is reflected in the "Portfolio", which is formed from the moment of admission to the residency by the students personally. Persons who have completed training in the EP of residency and have successfully passed the final certification are awarded the qualification "cardiac surgeon" and a certificate is issued.

Training of residents is carried out at clinical sites with personal participation in the treatment and diagnostic process, both in classroom time and during independent work. All the rules are reflected

in the Resident's Guidebook (approved by the minutes of the meeting of the postgraduate education sector for 03/09/2021). During the period of implementation of the EP residency in the specialty "Cardiac surgery, including children's", the clinical bases were large multidisciplinary hospitals of the city: SPE No. 4, SPE No. 7, AMKB, EHER, SCP&PS

Equipping clinical bases allows you to effectively implement active teaching methods: seminars, webinars, conferences, case studies, problem-based learning (PBL); Case-Based Learning (CBL), Team-Based Learning (TBL); training based on simulation technologies, analysis of clinical cases, medical records management, examination of the quality of medical care, case management, training in a clinic with the participation of a real patient, training in primary health care, attending medical conferences, consultations.

The resident training programme provides for the implementation of various forms of educational and research work, while some residents are involved in the implementation of scientific and technical projects carried out by teachers.

The Academic Policy for the 2020-2021 academic year, approved by the Board by the Protocol of 01/05/2021, stipulates the appointment of mentors. Mentors in residency are appointed annually in September by order. No more than 3 residents are assigned to each mentor.

The structure of the cardiac surgery residency educational programme provides for research and innovation activities, practical training of students. The training of residents is carried out on the basis of the RUE, the personal participation of the resident is implemented at the time of the formation of the Individual working curriculum for the entire period of study.

Thus, during a visit to the NSCS, experts established compliance with the basic criteria of the accreditation standard: a developed and approved educational programme that meets the requirements of the State Educational Standard of Education 2019 and is implemented in a student-centered and patient-centered environment in the best clinics of the city. The educational programme is provided with appropriate methodological documentation and documents accompanying residents (guidebook, Code, Portfolio structure, EMCD, syllables). Teachers have introduced and effectively apply various teaching methods, mainly of a practical nature, and involve residents in research, which contributes to the formation and development of competencies in the specialty.

Strengths:

1. Flexibility in the implementation of the educational programme;
2. The educational programme takes into account requests depending on changes in the labor market and the needs of the regions.
3. Taking into account the needs of practical health care in the development of electives;
4. Patient-oriented and safe learning environment;
5. Using innovative teaching methods to build clinical skills, including a simulation room and WETLAB
6. Implementation of the competence-oriented model of graduates of the NSCS named after Syzganov with a degree in Cardiac Surgery, including Children's.

Conclusions of the EEC on the criteria. Out of 31 standards conform: fully - 30, significantly -

1

Standard 2: completed

Recommendations for improvement identified during the external visit:

- 1) Strengthen the role of mentoring in training residents and motivating NSCS staff in performing the role of a mentor.

Standard 3: ASSESSMENT OF TRAINEES

Experts noted that the policy and procedure for assessing learning outcomes within the EP at the NSCS is carried out using criteria developed in accordance with the goals and objectives for the implementation of the EP and awarded qualifications within the framework of the current point-rating system for assessing knowledge and monitoring the educational process in accordance with the directive, regulatory and internal documents.

The assessment of educational achievements of students is an important element of activity in the educational process, which determines the level and quality of training of residents, as well as the competencies that graduates have upon graduation. The main provisions of the system for assessing educational achievements and the level of training of residents is carried out in accordance with the Academic Policy, a reference book - a guidebook and syllabuses of disciplines. The assessment policy and procedures, transparent and accessible, are carried out in two main directions: the assessment of the competencies of students and the assessment of the mastery of the learning outcomes of disciplines based on the criteria published in the regulatory and legal framework of the Republic of Kazakhstan and in the Academic Policy of the NSCS. For the implementation of the procedures for monitoring progress and intermediate certification, control and measuring instruments have been developed to assess the knowledge, skills and abilities of residents, as well as test tasks in the state and Russian languages. Midterm and final control are also carried out to assess knowledge. The study load of residents is compiled according to the levels of education: classroom contact work, independent work of residents, including under the guidance of a teacher. crisp and clear; the appraisal must be fair and honest. An analysis of the satisfaction and quality of teaching is carried out by means of questionnaires, as well as the provision of information materials.

Strengths:

1. An analysis of the achieved learning outcomes is carried out in comparison with the desired results, a questionnaire survey on the satisfaction of residents with the quality of educational services.
2. The portfolio of a resident allows you to assess the development of a resident's competencies: personal interest, professional competence, communicative, personal qualities, scientific interest.
3. The quality of the control and measuring instruments is subject to a multi-stage check.

Conclusions of the EEC on the criteria. Out of 11 standards conform: completely - 10, significantly - 1.

Standard 3: completed

Recommendations for improvement identified during the external visit:

- 1) Plan to improve the qualifications of teachers and mentors on modern technologies and teaching methods (test preparation, IT, distance learning, etc.).

Standard 4: RESIDENTS

According to the analysis, it can be noted that the work load of residents is compiled in accordance with the Law of the Republic of Kazakhstan "On Education", the mode of classes from 08.00 to 17.00 students is regulated by educational programmes developed on the basis of the State Educational Standard of Education 2017, 2020, sanitary and epidemiological rules and norms, curricula and recommendations of health and education authorities. Residents receive information about student support services from the information at the stands and through NSCH website www.nnch.kz. The resources of the NSCS, the teaching staff, the number and powerful material and technical equipment, the professionalism of the staff of practical health care (clinical mentors) allow providing balance and opportunities for preparing for the recruitment of students.

NSCS is continuously providing informational support to students, providing applicants with information about educational programmes and admission rules, as well as about vacancies in the labor market for graduates. There are conditions that ensure the stability of the recruitment of students for training in the educational programme. The procedures for monitoring the progress and achievements of residents in the assessment of educational results and the execution of documents for graduates have been provided. Employment and career growth of graduates is monitored, interaction with employers is carried out in the field of improving the quality of training. The rules for admission and training to residency of the SCP&PS are regulated in the Academic Policy, which is annually reviewed and approved by the Academic Council.

Strengths:

1. The NSCS has all the stages of training residents: admission to residency, the period of study and final certification.
2. The availability of a comprehensive, unified policy of admission and support of residents throughout the entire period of study, provided with sufficient resources (regulatory and legal framework, personnel, material, technical and financial support);
3. Active involvement of residents in the treatment and diagnostic process and good opportunities for their practical training, participation in the provision of highly specialized care.
4. Constant access of residents to the provision of emergency and planned medical care to the population with cardiac surgery pathology;
5. Implementation of the model of personal growth of residents (continuous self-improvement).
6. NSCS accepts residents on the basis of clearly developed criteria that make it possible for future employment.

Conclusions of the EEC on the criteria. Out of 30 standards conform: fully -30

Standard 4: completed

Standard 5: TRAINERS

According to the data received from external expert assessment and analysis of the documentation, it should be noted that the recruitment of teachers for the EP is carried out through a competition for filling vacant positions, the procedure for which is regulated by the Order of the Ministry of Education and Science of the Republic of Kazakhstan dated 04.23.2015. No. 230 "On approval of the Rules for the competitive replacement of positions of teaching staff and scientific workers of higher educational institutions" in accordance with the requirements of the order of the Ministry of Education and Science of the Republic of Kazakhstan dated 17.08.2009, No. 5750 "On approval of standard qualification characteristics of positions of teaching staff and persons equated to them."

The NSCS has a clear personnel policy, an effective system for the formation of high-quality teaching staff has been built. The activities of the teaching staff and employees of the NSCS named after A.N. Syzganov is carried out in accordance with the internal labor regulations and job descriptions approved by the Chairperson of the Board of the center. NSCS named after A.N. Syzganov applies effective and transparent recruitment and appointment criteria for faculty positions and guarantees equal recruitment opportunities consistent with legal requirements and any other selection criteria. Personnel policy in SCP&PS is an integral part of the strategic policy designed to bring personnel potential in line with the mission and goals of the university. As the teaching staff at the NSCS, employees who have established themselves as highly qualified specialists in cardiac surgery, who meet all qualification requirements, have full knowledge and possess modern methods and experience in teaching, are involved, which are necessary for effective preparation and training of residents. Teaching in major disciplines is provided by highly qualified specialists from the center itself, for the development of related and basic disciplines contracts are concluded with other organizations of medical education. For the purpose of moral and material incentives for NSCS employees, various incentives, bonuses, etc. are used, for high pedagogical activity and scientific results. The staff of the teaching staff consists of 55 employees, of which: doctors of medical sciences-7 people; candidate of medical sciences -12 people; candidate of biological sciences-1 person; Ph.D PhD-4 person; master - 2 people (Attachment 4).

Strengths:

1. High professional and scientific level of teachers and staff.
2. The teaching staff meets the qualification requirements for licensing educational activities and the profile of educational programmes.
3. Implementation of the results of innovative technologies and scientific developments of NSCS employees in health care to improve the quality and availability of medical services.
4. During the meeting of the teaching staff and questioning, it is necessary to highlight the presence of the "corporate spirit" and the assessment of the Mission of the Center and the role

of each employee in its implementation.

Conclusions of the EEC on the criteria. Out of 7 standards conform: fully - 7.

Standard 5: completed

Standard 6: EDUCATIONAL RESOURCES

The NSC has a service department to support residency students in the implementation of their educational and career needs. There are structural units providing support to residents in the development of educational programmes. A system of library and information services was provided, and funds allocated for the purchase of literature were allocated. The scientific center is equipped with a sufficient number of new generation computers.

The NSCS has three Internet centers (test center, library Internet room). They provide information security for the functioning of the center's network, the work of registered users with e-mail, as well as open access to educational information resources of the Internet for all teachers and residents from any computer included in the center's telecommunications network.

NSCS has signed more than 30 Memorandums of Cooperation with leading clinics in Kazakhstan and abroad, where there are departments of cardiac surgery. Scientific library of the NSCS named after A.N. Syzganov, signed agreements with international companies for access to the following Databases: Web of Science - webofknowledge.com, Elsevier - Scencedirect - sciencedirect.com, Scopus - scopus.com. Residents independently conduct patient surveys within the framework of research work, conduct a literature review, it is planned to carry out research work, which includes instrumental and laboratory studies - residents are allowed to access the necessary equipment of the clinical base.

Strengths:

1. Availability of a good scientific and clinical base and modern equipment.
2. The available training resources (library, computers, international platforms, information technologies, etc.) are available and meet the interests of residents in the educational programmes being implemented.
3. NSCS named after A.N. Syzganov has the infrastructure necessary for the successful implementation of the educational programme in the specialty 7R01118 - "Cardiac surgery, including children's".

Conclusions of the EEC on the criteria. Out of 21 standards conform: completely - 20, significantly - 1.

Standard 6: completed

Recommendations for improvement identified during the external visit:

- 1) Equip the simulation room in accordance with the Order of the Minister of Health and Social Development of the Republic of Kazakhstan dated May 29, 2015 No. 423. On the approval of standards for equipping simulation rooms (centers) of educational organizations in the field of health care.
- 2) Ensure information protection when working with documentation for residency programmes, including document flow.
- 3) Consider the possibility of introducing external academic mobility of residents and teachers with training on the basis of foreign international Centers, universities and clinics.

Standard 7: PROGRAMME EVALUATION

Monitoring of the quality of implementation of the educational residency programme in the specialty: "Cardiac surgery, including children's" is carried out in accordance with the plan of internal audits and orders of the Deputy Chairperson of the NSCS. The ongoing monitoring contributes to effective planning and resource allocation by adjusting and evaluating the effectiveness of ongoing processes. Evaluation of the effectiveness of the development of the educational programme is carried out through a survey and questioning of employers for their satisfaction with the professional competencies of graduates.

Training of students of residency in the specialty 7R01118 - "Cardiac surgery, including children's surgery" is carried out on the basis of the WC drawn up by the PGE department, coordinated and approved by the Deputy Chairperson of the Board for Scientific, Clinical and Innovation Activities. The EP has an external examination conducted by representatives of practical health care - employees of the administrative and managerial staff of clinical bases, as well as reviews of teaching staff from other universities.

The EP examination is carried out for compliance with the SES, the QED is approved according to the trajectories of specialist training, taking into account pre- and post-requisites, and evaluates the choice of methods for assessing the learning outcomes of residents. A systematic study and comprehensive assessment of the EP is carried out with the aim of improving and guaranteeing the quality of training.

In order to study the requests and interests of employers in the development of educational programmes, meetings, sessions, round tables with employers are held annually. Feedback results are analyzed, discussed at meetings of the PGE department, and published on the University website(www.nnch.kz). Representatives of the public and trade unions - constant feedback in the form of questionnaires and interviews, participation in various activities of the center. All stakeholders (teaching staff, residents, employers) are involved in the programme evaluation process through representation in the relevant structures.

Strengths:

1. The educational programme takes into account requests depending on changes in the labor market and the needs of the regions.
2. Flexibility of new education standards, providing for hours of optional components, the possibility of making additions and changes to the working curriculum
3. Availability of medical and diagnostic equipment that ensures the achievement of the clinical competence of the resident.

Conclusions of the EEC on the criteria. Out of 15 standards conform: completely -15.

Standard 7: completed

Standard 8: GOVERNANCE AND ADMINISTRATION

Every year, NSCS develops an operational plan for financial and economic activities in accordance with the Strategic Plan of the NSC, which is publicly available on the website. The evidence of the quality of teaching in the specialty "Cardiac surgery, including children's surgery" is the results of the annual final certification of residents (annual report) and the results of training at field clinical bases (reports). Information support for students in the SCP&PS is ongoing, from providing information to applicants for educational programmes with admission rules to providing information about vacancies in the labor market for graduates. Center website provides the official presentation of information in order to expand the market for educational services, familiarize students, employees, applicants and employers; as well as providing information to the public and other interested parties about the treatment, diagnostic, and advisory services provided.

The NSCS developed and approved the main internal document defining the scope of responsibilities and powers of the NSCS in respect of EP residency, including the obligation to provide the educational process in full with all the necessary information sources and access to network educational resources... This document is guided by the PGE department when managing the educational residency programme. The goals in the field of the integrated management system of the surgical department are consistent with the Policy in the field of the integrated management system of the Center and preserve the integrity of the integrated management system when planning educational services. The site of the NSCS named after A.N. Syzganov, there are functioning and constantly updating accounts in [Facebook](#), Instagram. The website page and social media accounts provide information on residency educational programmes, such as information for applicants, class schedules, academic calendar, catalog of elective disciplines, etc. Free Internet access is 100%.

Strengths:

1. In NSCS, the management system is built in accordance with the regulatory documents of the Republic of Kazakhstan, the Charter, the Strategic Development Plan;
2. The organizational, functional and staffing structure is consistent with the mission, goals, objectives and policy in the field of quality assurance of the NSC.
3. The responsibility of the academic leadership in relation to the development and management of the educational programme is determined.
4. Extensive collaboration, including international, with partners in the health sector.
5. The Center's desire to achieve high performance in all types of activities: educational, scientific, medical and educational.

Conclusions of the EEC on the criteria. Out of 15 standards conform: completely - 15.

Standard 8: completed

Standard 9: CONTINUOUS RENEWAL

Experts noted that NSCS named after A.N. Syzganov, in order to continuously improve the postgraduate educational process in accordance with the best practice of world educational management, taking into account the needs of practical health care in the Republic of Kazakhstan, which is in the reform stage, regularly initiates a review and updating of the process.

The needs of practical health care of the republic in specialists of our profile are regularly analyzed, in connection with these, the Faculty Council annually discusses the policy of selection of students, methods of selection and admission of students, taking into account the circumstances, needs for human resources, changes in basic medical education and the requirements of the curriculum.

NSCS has an official website, which is a source of information about the center, management and structural divisions that supports the mission, goals and objectives, is effectively used to inform the public about ongoing educational programmes. In addition to the site, information about the activities of the center is posted on information stands in the administrative building and departments. In the course of interviews with teaching staff, students of educational programmes and staff of the center, it turned out that they are well acquainted with the mission, goals, objectives and policy in the field of quality assurance and the prospects for the development of the scientific center.

Strengths:

1. The Center has an effective financial management policy and procedure that ensures the adequacy and transparency of the allocation of financial resources, including those aimed at continuous improvement of educational activities.
2. continuous assessment of the quality of learning outcomes / competencies, assessment of knowledge and skills, the learning environment of the programme.
3. updates of the educational programme for residency and improvement of the practice of its implementation take place taking into account the knowledge and skills gained by teachers at training events (seminars, master classes, conferences).
4. The presence of a large number of clinical bases with a stable financial condition, with modern medical and diagnostic resources, a large number of multidisciplinary beds, qualified human resources (both curators and mentors).

Conclusions of the EEC on the criteria. Out of 4 standards conform: completely -4.

Standard 9: completed

Based on the submitted self-assessment report, study of documents, examination of the material and technical base, structural units of the center, ensuring the implementation of the educational programme in the specialty: "Cardiac surgery, including children's", interviews with employees, residents, meetings and conversations with employers and graduates, the expert group made the following conclusions:

Thus, all 9 accreditation standards have been met, no inconsistencies in the fulfillment of the criteria of each of the basic accreditation standards in the process of analyzing the self-assessment

report and conducting the examination as part of the tasks of the external expert evaluation programme were found.

5. Recommendations for improving the educational residency in the specialty "Cardiac surgery, including children's":

Standard 2

- 1) Strengthen the role of mentoring in training residents and motivating NSCS staff in performing the role of a mentor.

Standard 3

- 2) Plan to improve the qualifications of teachers and mentors on modern technologies and teaching methods (test preparation, IT, distance learning, etc.).

Standard 6

- 3) Equip a simulation room in accordance with the Order of the Minister of Health and Social Development of the Republic of Kazakhstan dated May 29, 2015 No. 423. On approval of standards for equipping simulation rooms (centers) of educational organizations in the field of health care.
- 4) Ensure information protection when working with documentation for residency programmes, including document flow.
- 5) Consider the possibility of introducing external academic mobility of residents and teachers with training on the basis of foreign international Centers, universities and clinics.

6. Recommendation to the ECA Accreditation Council

The members of the EEC came to a unanimous opinion to recommend to the Accreditation Council to accredit of the educational programme in the specialty "Cardiac surgery, including children's» of JSC "National Scientific Center of Surgery named after A. N. Syzganov" (NSCS) for a period of 5 years

Chairperson

Zhanteleeva Lyazzat Asanova

Foreign expert

Rudoy Andrey Semyonovich

Academic expert

Mustafin Alibek Khamzenovich

Academic expert

Magyarov Valentin Manarbekovich

Academic expert

Dautov Tairkhan Bekpolatovich

Academic expert

Sarsenbayeva Gulzhan Iskendirovna

Representative of employers

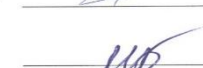
Brimzhanova Marzhan Dikhanovna

Resident representative

Elgondyev Tanzhas Adilovich

ECAQA Observer

Sarsenbayeva Dariyabanu Bulatovna



**Quality profile and external evaluation criteria (summary)
Of educational programme in the specialty
"Cardiac surgery, including children's" of NSCS**

Standard	Criteria for evaluation Number of standards = BS * / SU	Assessment			
		Totally coincides	Significantly corresponds	Partially compliant	Does not match
1	MISSION AND END OUTCOMES 17 = 10/7	10 \ 6	0 \ 1		
2.	EDUCATIONAL PROGRAMME 31 = 22/9	22 \ 7	0 \ 1		
3.	ASSESSMENT OF TRAINEES 11 = 7/4	7 \ 3	0 \ 1		
4.	TRAINEES 30 = 18/12	18 \ 12			
5.	TRAINERS 7 = 5/2	5 \ 2			
6.	EDUCATIONAL RESOURCES 21 = 10/11	10/10	0 \ 1		
7.	PROGRAMME EVALUATION 15 = 10/5	10 \ 5			
8.	GOVERNANCE AND ADMINISTRATION 15 = 8/7	8 \ 7			
9	CONTINUOUS RENEWAL 4 = 1/3	1 \ 3			
	Total: 150 = 91/59	91 \ 55	0 \ 4		
		150			

* BS - the basic standard must be fulfilled by each medical educational organization, and the fulfillment must be demonstrated during an external assessment of the medical educational and scientific organization.

List of documents studied by EEC members within the framework of accreditation

No	Name of documents	number	Date of approval
1.	Center structure	1	04/18/2019
2.	Articles of Association of the "Society"	1	
3.	Employee selection and admission policy	1	
4.	Personnel policy	1	05.03.2018
5.	Code of Conduct	1	04/18/2019
6.	Statement of Medical Ethics and Deontology	1	2018
7.	Ethics Commission and Regulation	1	02/01/2018
8.	Anti-corruption standard		12/31/2020
9.	Employee survey results	3	2018-2020
10.	Patient survey results	3	2018-2020
11.	Residents survey results	3	2018-2020
12.	The results of the questioning of the teaching staff	3	2018-2020
13.	Employer survey results	3	2018-2020
14.	Strategic plan and monitoring of implementation (approved original, extracts from the protocol, report, service notes, etc.)	3	05/29/2019
15.	Document certifying the review and approval of the mission of the organization by the advisory body (approved original)	1	02 July 2020 Board of Directors
16.	Portfolio of teaching staff (Information about achievements, awards of teachers, membership in authoritative associations, editorial offices, associations, etc.)	30	
17.	Quality management system implemented at NSCS in accordance with the requirements of ST RK ISO 9001: 2015	1	
18.	Safety regulations	1	01/20/2021
19.	Documents of the local ethical committee (regulations, plans, protocols, reports for 3 years), where STP with the participation of residents is considered	3	
20.	International Cooperation Programme and 3-Year Implementation Report	3	
21.	Information about cooperation with foreign organizations (on the website, list, form of cooperation, results)	1	
22.	Agreements with clinical and practice bases	15	
23.	Quality policy of NSCS (approved original)	1	01/05/2021
24.	Academic policy (regulations on the organization of the educational process)	1	01/05/2021
25.	Academic residency calendar	1	09/01/2020
26.	Residency Listener Guidebook	1	03/09/2021
27.	Teacher code of honor	1	01/05/2021
28.	Residency listener code of honor	1	01/05/2021
29.	Regulation on interm. appraisals	1	01/05/2021

30.	Outcome statement. state appraisals	1	01/05/2021
31.	Regulations on the Department of Postgraduate Education	1	01/05/2021
32.	Postgraduate education department plan	1	01/05/2021
33.	Postgraduate education department report	1	2020
34.	Nomenclature of PGE cases	1	01/05/2021
35.	Educational-methodical complex of disciplines: EP	5	04/02/2021
36.	CIS	5	03/01/2021
37.	Syllables	5	03/01/2021
38.	External and internal reviews of EP, CIS, Syllabuses	6	May 2021
39.	Component of choice	3	09/01/2020
40.	Exam sheets	3	
41.	Interim certification sheets	3	
42.	Protocols: DPE EMC SC	3	03/09/2021 03/01/2021 04/02/2021
43.	Resident portfolio	18	
44.	Calendar-thematic plan of additional education	1	01/05/2021

Attachment 3

**The list of residents of JSC “NSCS named after A.N. Syzganov ”
2020-2021 academic year**

Course	FULL NAME. residents	Specialty/ period of study
KX-4k	1. Bildebaev Kumil Erlenuly	6R112800 - Cardiac surgery, including children’s surgery 2017-2021
	2. Kuralbaev Damir Bagytbekovich	
	3. Konusov Eric Serikovich	
KX-3k	4. Қыdaybergen Askhat Bolatuly	6R112800 - Cardiac surgery, including children’s surgery 2018-2022

Attachment 4

Teaching staff list of JSC "NSCS named after A.N.Syzganov "

No.	Specialty	Manager	PPP
1	Cardiac surgery (adult, children’s)	Master, doctor of the 1st category Rakishev Bauyrzhan Aldabergenovich	1.d.m.s. Sagatov Inkar Ergalievich 2. Ph.D., doctor of the highest category, cardiac surgeon Kvashnin Andrey Viktorovich
2	Angiosurgery (X-ray surgery, interventional surgery) (adult, children’s)	Doctor of the highest category angiurgeon Matkerimov Askar Zheksembievich	1.Doctor of Philosophy PhD, doctor of the first category Baubekov Alzhan Alkeshevich 2. Ph.D., doctor of the highest category Demeuov Talgat Nurmakhanovich 3. Saduakas Almas Ergaliuly
3	General surgery (thoracic, abdominal, transplantation)	Ph.D., doctor of the 2nd category Chormanov Almat Tursynzhanovich	1.D.Med.Sc., professor, doctor of the highest category Seisembaev Manas Akhmetzharovich 2.the doctor of the highest category Doskhanov Maksat Onalbaevich 3.Doctor of Philosophy - PhD, doctor of the highest category Baimakhanov Zhasulan Bolatbekovich 4. Doctor of Philosophy - PhD, doctor of the highest category Nurlanbaev E.K.
4	General surgery (thoracic, abdominal, coloproctology)	surgeon Shokebaev Adil Abaevich	1.D.Med.Sc., Professor, Academician of the National Academy of Sciences of the Republic of Kazakhstan, doctor of the highest category Baimakhanov Bolatbek Bimendeevich 2.Med.Sc., professor, doctor of the highest category Zhuraev Shakirbai Shukirovich

5	General Surgery (Thoracic) Pediatric Surgery	Ph.D., doctor the highest category Shirtaev Bakhytzhon Kerimbekovich	1. Ph.D., doctor of the highest category Mukhtar Magzomovich Sundetov
6	Anesthesiology and resuscitation (adult, pediatric)	Ph.D., doctor the highest category Kuandykov Tleuberdi Kenesbaevich	1.D.Med.Sc., professor, doctor of the highest category Mierbekov Ergali Mamatovich 2. Ph.D., doctor of the highest category Mutagirov Vladimir Vladimirovich 3.c.m.s., doctor of the highest category Telzhan Erikovich Tnymkulov 4. doctor of the highest category Zharasbayev Adilbek Mauletkhanovich 5. doctor of the highest category Espenbetov Yessenay Bakytzhanovich 6.the doctor of the highest category Yunatanov Vasily Alekseevich
7	Cardiology (adult, pediatric), including interventional	Doctor of Philosophy - PhD, Physician the highest category Baimbetov Adil Kudaibergenovich	1.the doctor of the highest category Yakupova Ilinara Akhmetzhanovna 2.the doctor of the highest category Ormanov Bauyrzhan Koszhanovich 3. Bizhanov Kenzhebek Alibekovich 4. Bayramov Binali Amrulaevich
8t	Nephrology (adult, pediatric)	doctor of the second category Zhannur Maulenovich Syrymov	1. doctor of the second category Dabyldaeva Kuralay Serikovna
9	Hepatology		1. Ph.D. Ilyasova Bibigul Saparbekovna
1 0	Plastic surgery	Ph.D. assoc. prof., associate professor Muradov Mismil Islamovich	1.doctor of the first category Mukhamedkerim Kanat Bazarbekeuly
1 1	Obstetrics and gynecology (pediatric gynecology)	d.m.s. Aldangarova Gulim Akhmetovna	1. Chupin Alexander Nikolaevich
1 2	Radiation diagnostics (radiology, computed and magnetic resonance imaging, ultrasound diagnostics)	Doctor of the first category Baiguisova Dinara Zulharnaevna	1.the doctor of the first category Sadykov Chingiz Takhirovič 2. Ph.D. doctor of the highest category Bashikova Asiya Akhmetovna 3.c.m.s., doctor of the highest category Barlybai Raikhan Alikhanovna 4. doctor of the highest category Medetbekova Aida Khamitovna
1 3	Functional diagnostics	doctor of the highest category Abdrashev Erlan Baitureevich	1.the doctor of the highest category Israilova Galina Imirovna 2.Sataev Nurlan Adiyatovich 3. doctor of the first category Mamedova- Shermetova Nazilya Ismailovna 4.the doctor of the first category Abdiev Nurken Makhmatovich

1 4	Pathological anatomy (adult, pediatric)	doctor of the highest category Yenin Evgeniy Albertovich	1. doctor of the highest category Reshetina Natalia Vladimirovna
1 5	Clinical laboratory diagnostics	Abdilova Gulnur Bekmurzaevna	1.c.b.s. Aubakirova Aigul Toktasynovna 2. Yatsenko Svetlana Vasilievna 3. Abdigalieva Gulnar Kisibaevna
1 6	Nursing		1. Kurbaniyazova Gulmira Tursunovna
1 7	Management		1. d.m.s. Professor Medeubekov Ulugbek Shalkarovich 2. Master of PH Dakenova Gulzira Bulatovna
Total:		14	41
Total:		55	