

To the Accreditation Council of the
Eurasian Centre for Accreditation
and Quality Assurance in
Education and Health Care
06/20/2024

REPORT
OF THE EXTERNAL EXPERT COMMISSION ON THE RESULTS OF THE
EVALUATION OF THE EDUCATIONAL PROGRAM OF RESIDENCE IN
THE SPECIALTY OF
"MEDICAL GENETICS" OF THE RSE "THE MEDICAL CENTRE
HOSPITAL OF THE PRESIDENT'S AFFAIRS ADMINISTRATION OF THE
REPUBLIC OF KAZAKHSTAN"
ON THE REM FOR COMPLIANCE WITH THE ACCREDITATION
STANDARDS OF POSTGRADUATE EDUCATION PROGRAMS (RESIDENCE
SPECIALTIES) OF MEDICAL EDUCATIONAL ORGANIZATIONS

Period of external expert evaluation: May 29-31, 2024

Almaty, 2024

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LIST OF SYMBOLS AND ABBREVIATIONS

Abbreviation	Designation
AIS	Automatic information system
JSC	Joint-stock company
MCH	Medical center hospital
ECAQA	Eurasian centre for accreditation and quality assurance in education and health care
WFME	World Federation for Medical Education
IEP	Individual educational plan
MOH RK	Ministry of Health of the Republic of Kazakhstan
MSHE RK	Ministry of Science and Higher Education of the Republic of Kazakhstan
NJSC	Non-profit joint-stock company
SCC	Scientific and clinical council
EP	Educational program
Academic staff	Academic staff

1. Composition of the External Expert Commission

In accordance with the order of the ECAQA No. 18 dated 17.05.2024, the External Expert Commission (hereinafter referred to as the EEC) was formed to conduct an external evaluation of the educational program of residency in the specialty "Medical Genetics" in the period from May 29 to 31, 2024, consisting of the following members:

No.	Status in the EEC	Full name	Academic degree/title, position, place of work/place of study, year, specialty
1	Chairman	Yermukhanova Lyudmila Sergeevna	Candidate of Medical Sciences, Associate Professor, Head of the Department of Public Health and Healthcare of the NJSC "West Kazakhstan Medical University named after Marat Ospanov", Chairman of the "Public Healthcare" Committee at the State Unitary Enterprise
2	International Expert	Uryasev Oleg Mikhailovich	Doctor of Medical Sciences, Professor, Head of the Department of Faculty Therapy named after Professor V. Ya. Garmash, Vice-Rector for Academic Affairs of the Federal State Budgetary Educational Institution of Higher Education "Ryazan State Medical University named after Academician I.P. Pavlova" of the Ministry of Health of the Russian Federation
3	Academic Expert	Kasenova Saule Laikovna	Doctor of Medical Sciences, Professor of the Department of Residency of the Department of Postgraduate Education of JSC «Research Institute of Cardiology and Internal Diseases»
4	Academic Expert	Yesenkulova Saule Askerovna	Doctor of Medical Sciences, Professor of the Center for Postgraduate Education of JSC «Kazakh Research Institute of Oncology and Radiology», Member of the Association of Oncologists of the Republic of Kazakhstan
5	Academic Expert	Smailova Alтынay Nagyzkhanovna	Candidate of Medical Sciences, Director of the Strategy Department of the Corporate Fund «University Medical Center» of Nazarbayev University
6	Academic Expert	Salimbaeva Damilya Nurgazyevna	Candidate of Medical Sciences, Head of the Strategic Development Department of JSC «Scientific Center of Obstetrics, Gynecology and Perinatology»
7	Employer Expert	Zhukubaeva Almira Asetkyzy	Master of Pedagogy and Psychology, the highest medical category in emergency care, therapy, the first medical category in public health, Head of the Education Department of LLP «National Scientific Oncology Center»
8	Student Expert	Nurgaliev Arslan Ardakovich	Second-year resident in the specialty «Cardiology for Adults, children» of NJSC «Astana Medical University»

The EEC report includes a description of the results and the conclusion of the external evaluation of the educational program of residency in the specialty "Medical Genetics" for compliance

with the Accreditation Standards of postgraduate education programs (residency specialty) of medical educational organizations and conclusions (hereinafter referred to as the Accreditation Standards), recommendations of the EEC for further improvement of approaches and conditions for the implementation of the above-mentioned educational program and recommendations for the ECAQA Accreditation Council for Accreditation.

2. General part of the final report

2.1 Presentation of the educational program of residency in the specialty "Medical Genetics"

Name of the organization, legal form of ownership, BIN	RSE "The Medical Center Hospital of the President's Affairs Administration of the Republic of Kazakhstan" on the right of economic management
Management body	The body that manages the Hospital is the Medical Center of the President's Affairs Administration of the Republic of Kazakhstan (MC PAA RK)
Full name of the first director	Albayev Rustam Kuanyshbekovich
Date of establishment	1997
Location and contact details	Astana, Yesil district, E-495 street, No. 2
State license for educational activities in residency (date, number)	08.11.2019, No. KZ87LAA00017356
Information on branches, subsidiaries (if any)	-
Year of commencement of the accredited educational program (EP)	2022
Duration of study	2 years
Total number of graduates since the beginning of the EP	0
Number of residents in the EP since the beginning of the current academic year	3
Full-time teachers/part-time workers involved in the implementation of the EP	Total number of teachers - 7, including full-time - 4, part-time - 3 (clinical mentors). Sedateness, % - 1 d.m.n. Categorization, % - 100%
Website Instagram Facebook with active pages	E-mail: kense@bmc.mcudp.kz Official website: https://bmcudp.kz/ru/

The training is conducted according to six residency programs and currently 54 resident physicians are studying, including 16 - under the state educational order; 4 - under the order of local executive bodies.

Residency program 7R01102 "Medical Genetics" was approved at a meeting of the Scientific and Clinical Council (SCC) of the Hospital (minutes No. 1 of March 18, 2022). The mission of the EP is aimed at organizing and methodologically supporting the provision of qualified, specialized medical care to the population in establishing a genetic diagnosis and making a genetic prognosis when planning a pregnancy in the family of a patient with hereditary, chromosomal and congenital pathology in compliance with international quality control standards when performing laboratory tests.

The mission of the EP was determined on the basis of an analysis of the health needs of society in the field of medical genetics and was discussed at the project stage during the development process by working groups, which included specialists from the Hospital and representatives of practical

healthcare. In 2022, 1 resident was admitted (at the expense of own funds); in 2023 - 1 resident was admitted (state order) and 1 resident (at the expense of own funds). The Academic staff is represented by 4 full-time teachers and 3 clinical mentors from other clinical sites (Multidisciplinary City Hospital No. 2, City Perinatal Centre No. 2).

In order to satisfy residents with the training, meetings are held with the Deputy Director for Strategic Development, Science and Education, where issues of the quality of the content of the EP, the quality of teaching, the quality of the organization of the educational process, the quality of teaching technologies, the quality of forms of control of students' knowledge, learning conditions, material and technical, methodological, information support of the educational process, nutritional conditions, etc. are directly discussed.

The main aspect of social responsibility declared in the mission of the residency EP is the creation of an effective system of professional training to provide the industry with qualified personnel who meet the needs of society. Social responsibility is reflected in the improvement of corporate governance, as an element of the development of strategic planning of the Hospital. Such an aspect as community involvement is reflected in the development of marketing activities, and in the development of educational activities, as well as in the organization of innovative clinical activities of the Hospital.

Monitoring of employment of graduates of the residency program 7R01102 "Medical Genetics" and assessment of their competencies by employers is carried out. Good theoretical and practical training of future residency graduates and their demand in practical healthcare will allow employing all those who wish in the specialty: before completing the training, conduct a preliminary distribution of residents of the EP 7R01102 "Medical Genetics" with the participation of employers.

EP 7R01102 "Medical Genetics" is designed to ensure a holistic systemic understanding of the processes of clinical activity and improvement of skills in establishing a genetic diagnosis and making a genetic prognosis when planning a pregnancy in the family of a patient with hereditary, chromosomal and congenital pathology in compliance with international quality control standards when performing laboratory tests. EP 7R01102 "Medical Genetics" pursues certain professional goals. The objects of professional activity are patients with hereditary, chromosomal and congenital pathology (establishing a genetic diagnosis and drawing up a genetic prognosis in the patient's family and choosing preventive measures for pregnant women of the "risk group" to prevent the birth of a sick child in the family).

The introduction of innovative methods and technologies into the practical activities of the Hospital has a beneficial effect on the development of competitive advantages and contributes to improving the quality of life of patients, increasing the efficiency and quality of medical care, reducing treatment costs, etc., in which all structural divisions participate. Innovative approaches introduced into the practice of departments and other structural divisions allow resident doctors to acquire professional skills and competencies that may not be available in other educational organizations.

Resident doctors are also given the opportunity to take elective courses focused on specific activities as a medical geneticist. EP 7R01102 "Medical Genetics" includes the following elective disciplines: "Molecular genetic aspects in oncology", "Congenital malformations of the fetus", "Genetic information databases", "Human epigenetics", "Quality management system in medical laboratories".

In the Hospital's residency, training is conducted using updated clinical protocols, treatment recommendations, and proprietary and borrowed implementations in clinical practice. Residents have the opportunity to use Internet resources to access full-text articles and literary sources of databases. In 2024, the Hospital launched a pilot project to provide corporate access to ClinicalKey online resources. This is an extensive clinical source of information based on the principles of evidence-based medicine. Users of these resources (residents and medical workers) receive verified and regularly updated material in the professional field.

The use of modern medical achievements forms cognitive competencies that lead to the development of practical skills, and also contributes to the development of the need for the process of continuous professional development.

Resident doctors of EP 7R01102 "Medical Genetics" get acquainted with the basics of research work, participate in scientific research, publish, and thereby improve their professional level. The implementation of EP 7R01102 "Medical Genetics" is achieved by creating, maintaining and continuously improving conditions that guarantee the availability, safety and high quality of medical services provided to the population, as well as the introduction of scientific achievements and innovative technologies into the educational process.

The Hospital hosts scientific and practical conferences with international participation. Geneticists from Astana and the regions of the Republic of Kazakhstan, near and far abroad take part in the work of scientific forums. Residents are required to participate in conferences and educational seminars, symposia, trainings, master classes.

2.2 Information on previous accreditation

In May 2019, the Hospital successfully passed institutional accreditation in the field of continuous professional development (additional education) for compliance with the standards of the Non-profit institution "Eurasian Centre for Accreditation and Quality Assurance in Education and Health Care" (hereinafter referred to as the ECAQA), which is included in the register of recognized accreditation bodies of the Republic of Kazakhstan. Based on the results of the evaluation by the external expert commission, the ECAQA Accreditation Council assigned the Hospital the status of an accredited organization providing additional education with the issuance of certificate No IA00009 dated May 24, 2019 for a period of 5 years.

In 2023, the hospital underwent international specialized accreditation for compliance with the standards of the Independent Agency for Accreditation and Rating IAAR, including the 7R01102 program "Medical Genetics" for a period of 1 year.

2.3 Brief description of the results of the analysis of the self-assessment report of the educational residency program in the specialty "Medical Genetics" and conclusions on its completeness

The self-assessment report of the educational residency program in the specialty "Medical Genetics" (hereinafter referred to as the report) is presented on 94 pages of the main text, appendices on 7 pages, copies or electronic versions of 49 documents located at the link <https://drive.google.com/drive/folders/>.

The report is characterized by the completeness of answers to all 9 main accreditation standards and criteria, structured taking into account the recommendations of the Guidelines for conducting self-assessment of the educational program provided to the educational organization by the accreditation center - ECAQA, as well as the internal unity of information. A cover letter signed by the director Albaev Rustam Kuanyshbekovich is attached to the report, who confirms the reliability of the quantitative information and data included in the self-assessment report.

The report contains a list of 22 members of the internal self-assessment committee indicating the responsibility of each employee, information about the representative of the organization responsible for conducting the self-assessment of the educational program of the residency in the specialty "Medical Genetics" - Abildinova Gulshara Zhusupovna, MD, Professor, Head of the Personalized Genomic Laboratory, Chief Geneticist of the Ministry of Health of the Republic of Kazakhstan.

Self-assessment of the educational program of the residency in the specialty "Medical Genetics" was carried out on the basis of the order of the Director of the Hospital No. 223 dated 05.04.2024 "On the self-assessment of the educational program "7R01102 Medical Genetics".

All standards provide the Hospital's actual practice of training residents in the specialty "Medical Genetics" taking into account the start of student admission in 2022, substantiated data,

examples of implementing the objectives of the educational program, national and international events, methodological support, confirming compliance with the requirements of accreditation standards. The description in the self-assessment report is quite complete and updated in terms of the number of residents, teachers, administration, information on selection and admission, training results, knowledge and skills assessment results, the material and technical base of the university and clinical sites, contractual obligations with partners (universities, associations, bases), financial information, development and improvement plans, etc.

The report is submitted to the ECAQA in its final form, with data adjustments based on the above recommendations, written in a competent language, the wording for each standard is clear and understandable and described in accordance with the criteria of the standards, the tables contain links in the text and are numbered sequentially.

3. Description of the external expert evaluation

The external expert work within the framework of the evaluation of the educational program of the residency in the specialty "Medical Genetics" was organized in accordance with the Guidelines for the external evaluation of educational organizations and educational programs of the ECAQA / Dates of the visit to the organization: June 29-31, 2024. The sequence of the visit over 3 days is presented in detail in Annex 1-2 to this report.

To obtain objective information, the members of the EEC used the following methods and their results:

- interviews with management and administrative staff - 31 people;
- interviews with residents - 3 people;
- study of the website <https://bmcudp.kz/ru/>;
- interviewing 7 employees in the specialty "Medical Genetics", 4 teachers, 3 clinical mentors;;
- questionnaires of teachers and residents - 4 and 3, respectively;
- observation of resident training: attendance of 1 practical lesson ("Medical Genetic Counselling", Abildinova G.Zh., 1st year residents, Hospital geneticist's office);
- review of resources in the context of fulfilling accreditation standards: 3 practice/clinical engagement bases were visited, including the clinical diagnostic department of the Hospital, Multidisciplinary City Hospital No. 2 and City Perinatal Centre No. 2, where training is conducted on the residency program in the specialty "Medical Genetics" with the participation of 4 full-time teachers and 3 clinical mentors;
- study of 49 educational and methodological documents both before the visit to the organization and during the visit to the departments (the list of documents studied is in **Annex 2**).

The staff of the accredited organization ensured the presence of all persons specified in the visit program and in the lists of interview sites and conversations (Table 1).

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

№	Full name	Position
1	Shanazarov Nasrulla Abdullaevich	Deputy Director of the MCH for Strategic Development, Science and Education
2	Tuleuova Aliya Asylbekovna	Deputy Director of the MCH for the Outpatient Clinic
3	Berdikhodjaev Mynzhylky Sailauovich	Deputy Director of the MCH for Surgery
4	Hasanov Mustafa Huseyn ogly	Deputy Director of the MCH for Finance and Digitalization
5	Silnichenko Maxim Grigorievich	Deputy Director of the MCH for Administrative and Economic Activities

6	Turar Olzhas Askarovich	Acting Head of the Healthcare Technology Evaluation and Strategic Development Department
7	Sultanbekova Bibigul Malgazhdarovna	Head of the Quality Management and Patient Safety Service
8	Avdeev Andrey Vladislavovich	Deputy Head of the Science and Gerontology Department
9	Kazbekov Kairat Turekhanovich	Head of the Department for Interaction with Partner Clinics and Medical Tourism Development
10	Kabdulinov Ruslan Tulegenovich	Head of the Human Resources Management Department
11	Birim Kulova Zhazira Bakytovna	Chief Accountant
12	Zhumagulova Samal Akhmetkalievna	Deputy Chief Economist
13	Mukhamedkaliev Baurzhan Zhanburshaevich	Head of the Public Procurement Department
14	Nurzhanov Alibek Ablavich	Head of the Standardization, Pricing and Analytics Department
15	Turebayev Serikbol Shakhizatovich	Head of the Legal Department
16	Dzhakashev Berik Tolegenovich	Head of the Material and Technical Equipment Department
17	Zhakutov Eric Anuarovich	Head of the IT Department
18	Begezhaev Talgat Koblanovich	Head of the Security Service
19	Orazaliev Bekbolat Baltabaevich	Head of the Labour Protection, Civil Defence and Emergencies, Fire Safety and Emergencies Department
20	Erzhanova Farida Nurmukhambetovna	Head of the Professional Education Department
21	Alimbaeva Zamzagul Kaiyrzhanovna	Chief Specialist of the Professional Education Department
22	Arstanova Togzhan Sagyndykovna	Leading Specialist of the Professional Education Department
23	Abzhalieva Ulpan Asylbekovna	Leading Specialist of the Professional Education Department
24	Knyazova Gulsairan Zhaksybaevna	Head of the Personalized Genomic Laboratory
25	Abildinova Gulshara Zhusupovna	Head of the personalized genomic laboratory
26	Musabaeva Zulfiya Samatovna	Geneticist
27	Zhabakova Zhanna Maratovna	Geneticist
28	Borovikova Anna Viktorovna	Geneticist
29	Zhumazhanova Meruert Abilkhanovna	Head of the Medical and Genetic Consultation of the City Multidisciplinary Hospital № 2
30	Ainabekova Laura Musiralievna	Geneticist of the City Multidisciplinary Hospital № 2
31	Togzhigitova Ainur Maksutbekovna	Geneticist of the City Perinatal Centre
32	Shaimerdenkyzy Alfiya	Resident physician of the 2nd year of study
33	Shadman Nargiza Orazbaykyzy	Resident physician of the 1st year of study
34	Ablaikhanova Nurshat Tabyskhankyzy	Resident physician of the 1st year of study

On the last day of the visit to the organization, a meeting of the EEC members was held on the results of the external evaluation. A final discussion of the results of the external evaluation of the educational program, examination of documents, interview results, and questionnaires was held. The

EEC members began drafting the final report of the EEC. Generalizations of the external evaluation results were made. The experts individually filled out the "Quality Profile and Criteria for External Evaluation of the Educational Residency Program in the Specialty "Medical Genetics" for Compliance with the ECAQA Accreditation Standards". The EEC members made no comments. Recommendations for improving the educational program were discussed and the chairperson, L.S. Yermukhanova, held a final open vote on the recommendations for the ECAQA Accreditation Council.

Comfortable conditions were created for the work of the EEC; access to all necessary information and material resources was organized. The Commission notes the high level of corporate culture of the Hospital, the high degree of openness of the team in providing information to the ECAQA Accreditation Council members.

While conducting a survey of residents, 100% rated the work of the External Expert Commission for Accreditation as positive. The majority of respondents (100%) believe that it is necessary to conduct accreditation of an educational organization or educational programs.

According to 100% of teachers, the survey conducted by the ECAQA is useful for developing recommendations for improving key areas of activity of the accredited educational organization.

At the end of the visit, the chairman of the EEC announced recommendations for the management and employees of the educational organization based on the results of the external evaluation as part of the specialized accreditation.

4. Analysis of compliance with accreditation standards based on the results of an external evaluation of the educational program of the residency in the specialty "Medical Genetics"

Standard 1: MISSION AND FINAL OUTCOMES

1.1 Mission statement

In accordance with the Development Strategy of the RSE "The Medical Centre Hospital of the President's Affairs Administration of the Republic of Kazakhstan" on the REM for 2022-2026, agreed upon by the head of the State Institution "The Medical Centre of the President's Affairs Administration of the Republic of Kazakhstan" and approved by the Director of the Hospital on March 14, 2022, the mission of the Hospital is to achieve a high level of public health while continuously improving medical care using advanced methods of prevention, diagnosis, treatment and rehabilitation based on joint responsibility for maintaining and improving health. At the same time, one of the important strategic directions of the Hospital's development is the development of innovative and scientific-educational activities, within the framework of which work is constantly underway to improve and expand the educational services provided.

In the implementation of the program activities, namely, following the interview with the heads of the organization, in interviews with residents and teachers, compliance with the criteria of **standard 1** was established.

All participants in the educational process know the mission of the educational program, took part in the formation of proposals for formulating the mission, while the mission was communicated to potential residents through the website, social networks, information letters to medical organizations. The strategic plan of the organization for the period 2022-2026 was reviewed, including such areas as the development of innovative and scientific and educational activities, which confirms the fulfilment of the accreditation standard and demonstrates the goals, objectives and prospects of the organization. From interviews with residents, it was established that before the start of classes, teachers inform about the mission, work plans of the educational organization, tell where to get the necessary information about the educational program, teachers, training bases.

During the visit to the educational organization's departments, the experts noted the educational organization's strengths in relation to the accredited educational program, including: developed infrastructure and material and technical equipment of the Hospital, high level of qualification and professionalism of doctors, international collaborations, including scientific activities.

The Hospital has departments that are directly related to the residency program in the specialty "Medical Genetics". Thus, there is a laboratory of a personalized genomic laboratory, which is equipped with sequencers for modern molecular genetic research, equipment for the entire spectrum of cytogenetic and molecular cytogenetic research, which can be noted as the best practice in education.

The results of the documentation study demonstrate that the mission of the organization and the mission of the residency program in the specialty "Medical Genetics", and the educational process is built in accordance with the State Compulsory Educational Standard and current Laws and Statutory Instruments (LSI) in postgraduate education and health care. At the same time, during meetings with the Academic staff - geneticists, the experts identified a number of problems, including the lack of separate staff units of teachers and clinical mentors.

The educational organization conducts training for residents in the following clinical bases and departments: Clinical Diagnostic Department of the Hospital, Multidisciplinary City Hospital No. 2 and City Perinatal Centre No. 2, where it provides a patient-oriented approach through medical genetic counselling. The educational organization pays due attention to the safety and autonomy of patients by holding seminars and trainings.

Experts have found that residents have appropriate working conditions to support their own health, since the educational organization provides residents with a separate locker room with a personal locker, a workstation with a computer, access to an electronic database of literature on the specialty, a canteen with discounted prices for employees.

Such basic competencies of residents in the accredited specialty as medical and genetic counselling of pregnant women at risk for congenital and chromosomal pathology, as well as special competencies including cytogenetic and molecular genetic studies help the educational organization to apply innovative forms of training. This will allow residents to develop such skills and qualities as interpreting the results of modern genetic research and a personalized approach to choosing genetic diagnostic methods.

The educational organization encourages residents to strive to participate in research in the chosen specialty through participation in conferences, involvement in the implementation of scientific projects and grants, and also ensures the participation of residents in such academic events as Republican conferences.

At the same time, experts have determined that for improvement: involvement of stakeholders and consideration of the possibility of expanding their own clinical base for medical and genetic counselling of patients with congenital and hereditary pathology, married couples with infertility and reproductive disorders.

1.2 Professionalism and professional autonomy

Experts have determined that the formation of professionalism includes the work of a resident under the supervision of a clinical mentor, during which the resident receives special knowledge, hones practical skills, for the assessment of which formative and summative assessment are used. As a result of training, the resident physician receives a holistic vision of processes, the ability to treat "not the disease, but the patient", to select effective and safe treatment, which generally determines an individual approach to patients - the autonomy of decisions in favour of the patient. The EP presents a list of practical skills recommended by the State Compulsory Educational Standard, their number and the level of fulfilment of competencies. Supervision of patients, participation in diagnostics, filling out electronic documentation of the information system, writing a medical history are performed by resident physicians independently under the supervision of a mentor.

The educational organization promotes professional autonomy of residents by providing them with the opportunity to find employment in vacancies of resident physicians in supervising departments. For example, a 2nd-year resident, Shaimerdenkyzy A., is employed as a resident physician of the Laboratory and has her own job responsibilities.

Experts have established that the educational organization fully implements autonomy in relation to the selection of residents for the accredited specialty. The Hospital has developed a SOP "Algorithm for organizing postgraduate education in residency based on the MCH PAA RK", CEP /

SQE ON and PO-8.1, which reflects all stages and components of the educational process, the structures and resources involved.
<https://drive.google.com/drive/folders/14jxK8UYsRQdqksmwnKMVyEzNsJDa9EKp?usp=sharing>.

The procedure for the selection and admission of resident doctors is regulated by the order of the Ministry of Education and Science of the Republic of Kazakhstan dated October 31, 2018 No. 600 "On approval of the Model rules for admission to training in educational organizations implementing educational programs of higher and postgraduate education" <https://adilet.zan.kz/rus/docs/V1800017650> and the internal regulatory document Rules for admission to the residency of the Hospital, which determine the procedure for admission to the residency.

The hospital has autonomy in determining the content and form of the entrance examination in the specialty, choosing the persons included in the examination and appeal committee, while observing the requirements for the number of examiners and compliance with the profile of the residency specialty.

Personnel autonomy follows from the possibility of internal and external search for candidates for a vacant position. Internal search provides the ability to use the personnel reserve, which allows the organization to quickly and easily select candidates for newly created and vacant positions to be filled, effectively organize the training and internship of specialists included in the reserve, rationally use them in various areas and levels in the management system.

Specialists of the Hospital are involved in the training of resident doctors in accordance with the order of the MSHE of the RK dated January 5, 2024 No. 4 "On approval of qualification requirements for the educational activities of organizations providing higher and (or) postgraduate education, and the list of documents confirming compliance with them." <https://adilet.zan.kz/rus/docs/V2400033892>

Personal employment, reimbursement of expenses incurred at the expense of budgetary funds, granting the right to independent employment, exemption from the obligation or termination of the obligation to work off graduates of the residency who studied on the basis of the state educational order will be determined in accordance with the order of the Ministry of Education and Science of the Republic of Kazakhstan dated August 11, 2023 No. 403 "On approval of the Rules for sending a specialist to work, reimbursement of expenses incurred at the expense of budgetary funds, granting the right to independent employment, exemption from the obligation or termination of the obligation to work off citizens of the Republic of Kazakhstan who studied on the basis of the state educational order." <https://adilet.zan.kz/rus/docs/V2300033291/info> At the moment, there is no release of the EP "Medical Genetics".

The hospital implements an educational program that meets the requirements of the State Compulsory Educational Standard, staffed by academic specialists with clinical experience and academic titles, and has sufficient resources for training resident doctors.

A meeting with the administration of the organization was held to verify **standard 1**. During the conversation, the experts asked the following questions regarding the policy of admitting residents and transferring from one course to another. During the answers, F. N. Yerzhanova explained and gave full, detailed answers to the questions posed.

The relationship between the Hospital and residents is regulated by the "Residency Regulations", "Academic Policy" and the agreement for the provision of educational services, which is concluded with each student upon enrolment in the Hospital's residency.

These internal documents cover the rights and obligations of residents, including the right to freely express their own views and beliefs.

Academic freedom of residents is manifested in the right to choose from a catalogue of new elective disciplines and is ensured by the educational organization through such mechanisms as updating the catalogue of elective disciplines, academic mobility, off-site training, publications in the Hospital journal "Bulletin of the MCH PAA RK" and is described in the documents "Residency Regulations", "Academic Policy" and the agreement for the provision of educational services, which is concluded with each student upon enrolment in the Hospital residency.

While conducting a survey of 3 residents (on the resource <https://webanketa.com/>), out of 22 questions, a number were devoted to the quality of the educational process and the educational program. It was found that 100% of residents will recommend studying in this educational organization to their acquaintances, friends, relatives. And 100% of respondents believe that the heads of the educational program and teachers are aware of the problems of students related to training. To the question "Do you think this educational organization allows you to acquire the necessary knowledge and skills in your chosen specialty?", 100% of residents answered positively.

7 teachers surveyed (21 questions of the questionnaire) also answered that 100% are satisfied with the organization of work and the workplace in this educational organization. The experts determined that the organization has a healthy microclimate, since the manager is quite accessible to both residents and employees, responds promptly to requests and wishes. In the questionnaire, 100% of teachers are satisfied with the microclimate of the organization. In the opinion of 100%, in the educational organization, the teacher has the opportunity to realize himself as a professional in his specialty. For your information, a total of 7 people responded (in total, there are 4 Academic staff and 3 clinical mentors on staff).

1.3 Final learning outcomes

The final learning outcomes are defined and included in the document of the EP of the residency in the specialty "Medical Genetics", which is developed in the form of the SOP "Algorithm for organizing postgraduate education in residency based on the MCH PAA RK", CEP / SQE ON and PO-8.1 and is presented <https://drive.google.com/drive/folders/14jxK8UYsRQdqksmwnKMVyEzNsjDa9EKp?usp=sharing>. Informing stakeholders about the final learning outcomes of residents in the specialty "Medical Genetics" is carried out by monitoring the learning outcomes and using the "Platonus" AIS. The experts were convinced that the professional behaviour and communication skills of residents are formed by means of the above SOP.

Teachers and residents are informed about the code of ethics. The document that allows to orient each member of the team towards achieving common goals, concentrate their initiative, enterprise, streamline their business communication and ensure a favourable moral and psychological climate is the "Code of Honour of the Faculty and Resident Doctor of the Hospital", approved by order No. 250 dated July 18, 2019. The Code contributes to the formation and development of a free-thinking creative personality, capable of independently solving ideological and professional problems. The Code defines the basic rules of corporate culture and is an establishment of a set of norms of behaviour of the faculty, students and specialists of the Department, and also determines the attitude of resident doctors and doctors to patients.

While determining the final learning outcomes, the employees of the Department of Professional Education of the Hospital took into account the previous learning outcomes in the bachelor's degree and internship, and also took into account the goals and objectives of subsequent continuous professional development in the chosen specialty. The educational organization provides training in additional and non-formal education (continuous professional development), including programs in the specialty of the accredited educational program.

The interviewed teachers answered that 100% are fully satisfied with the level of previous training of residents.

The experts established a clear continuity between the final results of the previous training of residents (prerequisites) and training in residency, and subsequent programs of continuous professional development.

100% of the respondent teachers believe that students of this educational organization have a high level of knowledge and practical skills after completing the training program.

1.4 Participation in the formulation of the mission and final outcomes

While developing the goals and objectives of the educational program of residency in the specialty "Medical Genetics", resident doctors, specialists of the Hospital, authorized governing bodies in health care and education, health care organizations, potential employers, professional medical

associations, and the public took part. Other (external) stakeholders involved in formulating the mission and expected results include: potential employers, national public and professional associations, and healthcare organizations.

While updated regulations and orders in education and healthcare are issued, the developers of the educational program take these changes into account and make the appropriate changes.

At the same time, when talking with residents and employers, experts did not receive a clear answer to the question "Do you participate in formulating the mission and goals of the organization, educational program?", "What is the personal contribution of residents to improving the educational program?" Residents did not give a clear answer to these questions.

Conclusions of the EEC on the criteria. Compliant out of 14 standards (including 9 basic, 5 improvement standards): fully - 9/5.

Standard 2: EDUCATIONAL PROGRAMME

2.1 Framework parameters of the postgraduate medical education program

The model of the educational program of residency in the specialty "Medical Genetics" is determined on the basis of the final learning outcomes of residents; therefore it includes the development of general key competencies and professional competencies and is described in the EP. Learning outcomes are formulated both for the entire EP and for each discipline. To achieve them, resident doctors acquire theoretical knowledge and practical skills in the disciplines of the compulsory component (CC) and the disciplines of the elective component (EC), which are developed taking into account the specifics and focus, the strengths of the teachers/mentors of the Hospital's personalized genomic diagnostics laboratory.

Duration of training is 2 years. Systematicity and transparency of training is guaranteed by the fact that all training conditions are provided with systemicity, continuity of their content, consistent development of all competencies depending on the specialty, takes into account the logic of the academic relationship of disciplines, their continuity. The model of the educational program based on the established final results of training of residents and the qualifications they receive is also ensured by the transparency of training. Residents and teachers are informed about the necessary competencies that both students and teachers acquire. This occurs in conditions of openness and awareness of the successes of residents.

To implement the educational program of residency in the specialty "Medical Genetics", the organization's documents contain EMCD, which defines the goal, takes into account the integration of practical and theoretical components, independent work. Compliance with the State Compulsory Educational Standard and standard requirements is established.

While attending a practical lesson on the topic "Medical and Genetic Counselling", the experts received convincing data that the training is conducted according to plan, before the lesson, residents answer tests, receive feedback from the teacher, have the opportunity to improve their skills in medical and genetic counselling of pregnant women at risk for congenital and chromosomal pathology of the fetus. The organization ensures compliance with ethical aspects in the implementation of the educational program, since the experts studied the "Code of Honour of the Faculty and Resident Doctor of the Hospital", approved by order No. 250 dated July 18, 2019, and during the interview, the residents responded that they were informed about the content of this document.

Analysis of educational activities showed that the scientific basis and all scientific achievements in the relevant disciplines are taken into account, additions are made to the bibliography of the EMCD and syllabuses, and teachers use them in the classroom. The mentoring system described in the document SOP "Algorithm for organizing postgraduate education in residency based on the MCH PAA RK", CEP/SQE ON and PO-8.1 was evaluated. There are a total of 4 teachers and 3 clinical mentors, whose tasks are to train residents and assist in mastering practical skills.

The procedure for informing residents about their rights and responsibilities are reflected in the internal regulatory documents "Academic Policy of the MCH PAA RK", "Residency Regulations of

the MCH PAA RK", SOP "Algorithm for organizing postgraduate education in residency based on the MCH PAA RK".

The qualification obtained as a result of mastering the educational program of residency in the specialty "Medical Genetics" corresponds to level 8 of the national qualification framework (**ESG1.2**).

Teachers use such methods of teaching residents as lactations, practical classes, and seminars. The list of teaching methods is described in the EP. Thanks to these methods, residents can participate in providing medical care to patients. Teachers can provide a resident with supervision of approximately 3-5 thematic patients per day and 12-20 per month. For example, residents of the educational program of residency in the specialty "Medical Genetics" upon completion of training can perform such manipulations as karyotyping, cytogenetic studies, DNA extraction, medical and genetic counselling.

Experts have established that the principles of academic honesty and anti-plagiarism are fully implemented in the educational organization. This is reflected in the documents "Academic Policy of the MCH PAA RK", "Residency Regulations of the MCH PAA RK", SOP "Algorithm for organizing postgraduate education in residency based on the MCH PAA RK". Academic honesty is applicable at such stages of resident training as research activities. And anti-plagiarism is applicable when residents are preparing publications and reports. Residents are trained to promptly collect informed consent from patients for any diagnostic and therapeutic procedures. Experts noted that the medical records contain a corresponding document signed by the patient.

In order to ensure the principles of academic honesty in accordance with paragraph 37 of Annex 5 of the Order of the Ministry of Education and Science of the Republic of Kazakhstan No. 595 dated October 30, 2018 "On approval of the Model rules for the activities of educational organizations of the corresponding types", the specialists of the science department check scientific works and publications of students for elements of plagiarism. On the public procurement portal, the Hospital signed an agreement with "PLAGIAT.PL" LLC to provide access to the Antiplagiat program No. 1906 dated August 2, 2023. The check is carried out on the basis of a memo from the head of the EP, teacher or head of the Department. The system provides information on the originality of the text indicating the percentage of originality of the text; the inspector issues a report with a certificate.

Thus, by the end of the 2-year training, residents will acquire the basic skills and abilities in the profession of a geneticist, which will allow them to work in institutions such as medical genetic consultations (**ESG 1.2**).

The experts have not found any violations regarding the principle of equality in postgraduate education and continuous professional development, since the educational organization complies with the Constitution of the Republic of Kazakhstan, the Law on the Languages of the Peoples of the Republic of Kazakhstan and other regulatory legal acts in the field of education and health care.

In accordance with the Academic Policy, the Hospital, adhering to the basic principle of equality of rights of all to receive quality education of the state policy in the field of education of the Law of the Republic of Kazakhstan dated July 27, 2007 No. 319-III "On Education" <http://adilet.zan.kz/rus/docs/Z070000319> guarantees that EP 7R01102 "Medical Genetics" is implemented in accordance with the principles of equality in relation to resident doctors, specialists, patients, regardless of gender, ethnic origin, religion, sexual orientation, socio-economic status and physical capabilities. Residency training is carried out in the state and Russian languages, while the resident physician chooses the language of instruction independently (Law of the Republic of Kazakhstan "On Languages in the Republic of Kazakhstan" dated July 11, 1997 No. 151-I <https://adilet.zan.kz/rus/docs/Z970000151>)

The hospital adheres to the main principle of the legislation of the Republic of Kazakhstan in the field of healthcare - ensuring the equality of rights of citizens of the Republic of Kazakhstan to receive safe, effective and high-quality medical care in accordance with the Code of the Republic of Kazakhstan dated July 7, 2020 No. 360-VI ZRK "On Public Health and the Healthcare System". <https://adilet.zan.kz/rus/docs/K2000000360>

The educational organization has a mechanism for regularly adapting teaching and learning

methods to the requirements of modern science and education, as well as to the current needs of practical healthcare. This mechanism includes trainings on effective teaching.

Resident teaching methods include active learning methods: seminars, webinars, conferences, cases, discussion of a clinical case (analysis), symposia, and clinical rounds. Interactive teaching methods are also provided: exchange of information between the teacher and the student, work in a multidisciplinary team, discussion, comparison and contrast of the evidence base. These methods are appropriate and relevant for mastering competencies during residency training.

The hospital guarantees transparency of the selection procedure, training in residency; adheres to the equality of rights of all students to receive a quality education; accessibility of education taking into account the intellectual development, psychophysiological and individual characteristics of each person; developmental nature of education; priority of civic and national values, human life and health, free development of the individual; respect for human rights and freedoms; stimulation of the education of the individual and development of giftedness; unity of training, education and development. Fairness in assessing residents is achieved by maintaining equality of approaches to assessing the activities of each participant in the educational process, since the assessment results do not depend on personal attitudes towards the student.

This indicates compliance with Standard 2 in terms of adapting training to the needs of residents.

2.2 Scientific method

The educational program includes scientific foundations and methodology of medical research. In order to improve the professional growth of the Hospital residents, the Scientific Club "School of Young Scientists" operates, within the framework of which seminars, master classes and conferences are held, as well as a round table on current topics of scientific research. The Hospital staff and invited specialists give lectures to resident doctors on topics of scientific foundations, research methodology, and writing articles: "Tips for writing medical clinical cases", "International practice of writing a clinical case report", "Communication skills, ethical standards and deontology in healthcare", "Principles of epidemiological safety and standards for residents". During a conversation with the residents, the experts learned that they use scientific data in their training and know the basics of evidence-based medicine. The teachers said that they teach residents methods of critically evaluating literature, articles and scientific data, and the application of scientific developments.

In order to develop skills of critical evaluation of literature, writing scientific articles and publications among resident doctors, the Hospital plans to hold lectures by specialists with extensive experience in scientific work. The Hospital annually organizes courses in the field of methodology of scientific research, writing medical clinical cases (report by Professor of the "Nazarbayev University" AEO Gaipov Abdujappar Yerkinovich). Independent work of a resident doctor also includes working with educational and additional literature, scientific data, compiling abstracts and presentations on certain topics. Also, as part of independent work, residents are offered to analyse scientific publications from the standpoint of evidence-based medicine on a given topic of the medical and genetic profile. With independent study of scientific publications in periodicals and Internet resources, the resident doctor develops critical and scientific thinking.

Taking into account the achievements of scientific, technological, medical and pharmaceutical developments, the current and expected needs of society and the healthcare system, the EP plans to periodically make changes and additions to the compilation of the EC disciplines. The Hospital's Catalogue of Elective Disciplines includes disciplines not only in the core area, but also in social and behavioural sciences: "Public Health", "Evidence-Based Medicine", "Legal Regulation of Public Relations in Healthcare", and "Dispute Resolution in Healthcare". Evidence-based medicine is a new approach, a direction in the technology of collecting, analysing, summarizing and interpreting scientific information. This is the integration of the best scientific data with the clinical experience of the doctor and the values of the patient, conscientious, accurate and meaningful use of the best results of clinical studies to select a diagnosis for a specific patient.

While questioning residents, it was found that the educational organization has access to the participation of students in research work and 100% of people are completely satisfied with this. Residents should be engaged in R&D and in response to the questionnaire, 100% wrote that they are already engaged in R&D.

2.3 Structure, content and duration of the residency program

There are documents containing requirements for the structure and content of educational programs, including EP 7R01102 "Medical Genetics" in accordance with the requirements of the order of the Ministry of Health of the Republic of Kazakhstan dated July 4, 2022 No RK MOH-63 "On approval of state compulsory standards for levels of education in the field of health care" (SCES) and is included in the register of higher and postgraduate education with a coefficient of achievement of learning outcomes of 96.09%. Responsibility for the selection and implementation of innovations in the educational process lies with Abildinova G.Zh.

The content of the work programs and the catalogue of elective disciplines reflect the needs of the healthcare system, including "Molecular genetic aspects in oncology", "Congenital malformations of the fetus", "Genetic information databases", and "Human epigenetics", as well as the specifics of R&D and scientific achievements of teachers. For the successful implementation of the educational program of residency in the specialty "Medical Genetics", the organization has resources for organizing the assessment of practical skills of residents (Laboratory of personalized genomic diagnostics). Experts have established that the educational program takes into account the requirements of legislation, including with respect to the needs of practical health care.

The theoretical and practical components of the educational program comply with the State Compulsory Educational Standard. Possible future roles of a residency graduate, namely, a medical expert, a manager, are formed through such disciplines (or topics) as "Quality Management System in Medical Laboratories".

The educational organization guarantees the adjustment of the structure, content and duration of the educational program in case of any changes in various sciences, demographic, as well as in response to the needs of the healthcare system.

Teachers provide residents with methodological and didactic materials, additional literature to prepare for classes, in which 100% are fully satisfied.

The organization has its own clinical base, in addition, clinical bases - for example, the City Perinatal Centre (in 2023, 1847 pregnant women at risk and 58 new-borns with suspected congenital or hereditary pathology were consulted). And to the question of the questionnaire "Is there sufficient time for practical training (patient supervision, etc.)", 100% of residents answered with full agreement. At the same time, 100% of residents claim that after the end of classes, the teacher provides feedback (listens to your opinion, conducts a mini-questionnaire, and works on mistakes).

2.4 Organization of training and the relationship between postgraduate medical education and the provision of medical care

The management of the educational process, reflected in the self-assessment report (**Standard 2**) and general approaches to management were confirmed during a visit to the Laboratory of Personalized Genomic Diagnostics, clinical sites and the Department of Professional Education of the Hospital and a conversation with the head and employees.

The experts familiarized themselves with the work of the departments, including the heads of departments, a total of 4 meetings were held and a cross-interview established that training at the clinical sites fully complies with the requirements necessary for accreditation.

Thus, responsibility for choosing the base for clinical training and practice of a resident in the specialty "Medical Genetics" was assigned to Abildinova G.Zh. The experts analysed the information on the availability of accreditation of clinical sites and concluded that no discrepancies with the criteria and requirements of accreditation of the ECAQA were found.

The training of residents in the specialty "Medical Genetics" is aimed at meeting the needs of practical healthcare. This organization is specialized in the field of training geneticists, and provides a lot of opportunities and conditions for qualified training of specialists in this specialty. Residents of

this specialty can supervise patients with such diseases as congenital malformations, chromosomal pathology, and pregnant women at risk for congenital and chromosomal pathology of the fetus.

This is facilitated by mentoring, which is carried out in the organization. Residents deepen their theoretical knowledge, develop communication skills.

Of the 3 residents surveyed, 100% answered that teachers use active and interactive teaching methods in classes quite often.

Abildinova G.Zh. took part in planning, discussing, approving and reviewing the educational program of residency in the specialty "Medical Genetics".

Conclusions of the EEC on the criteria. Comply out of 22 standards (including 19 basic, 3 improvement standards): fully - 19/3.

Standard 3: ASSESSMENT OF RESIDENTS

3.1 Assessment methods

The study of the control and measuring tools (100 tests, 15 situational tasks) showed that the organization has implemented an appropriate assessment policy that allows for a comprehensive assessment of the academic achievements of residents. During the interview, residents talked about the forms of assessment, for example, testing, solving situational problems, interpreting the results of genetic studies, and that they are satisfied with everything. They also receive regular feedback from teachers. The system of appealing the assessment results is reflected in the documents in accordance with the Law of the Republic of Kazakhstan "On Education" dated July 27, 2007 No. 319-III; Order of the Ministry of Health of the Republic of Kazakhstan dated July 4, 2022 No RK MOH-63 "On approval of state mandatory standards for levels of education in the field of health care"; by the order of the Ministry of Health of the Republic of Kazakhstan dated 11.12.2020 No. ҚР ДСМ-249/2020 "On approval of the rules for assessing the knowledge and skills of students, assessing the professional readiness of graduates of educational programs in the field of health care and specialists in the field of health care"; by the order of the Ministry of Education and Science of the Republic of Kazakhstan dated 20.04.2011 No. 152 "On approval of the Rules for organizing the educational process according to the credit technology of education in organizations of higher and (or) postgraduate education", but during the period of operation of the educational organization, there were no precedents of appeal. The assessment covers not only knowledge and skills, but also professional behaviour and communication skills.

During a visit to the organization, the management was asked the question: "Are external examiners involved in order to improve the fairness, quality and transparency of the assessment process?" And the answer was "Yes".

3.2 The relationship between assessment and learning

During interviews with 7 teachers and clinical mentors regarding assessment methods, experts received convincing information that a point-rating assessment is used. Residents also shared their opinions on the timeliness of testing, pre-exam counselling, clarity of the entire assessment procedure and its fairness. For example, residents said that there is a test database.

Experts examined resources for organizing the assessment of knowledge and practical skills, namely, a test task database and a case study database.

Experts determined that the choice of resident assessment methods is based on the documents approved in the Hospital, since the practical part of the training is the main one. For example, such ongoing assessment methods as case studies and interpretation of genetic test results promote inter-professional learning and an emphasis on clinical skills. Established assessment methods ensure that the resident has mastered all sections of the educational program and acquired the necessary practical skills.

In the interviews, residents confirmed that they are provided with feedback after completion of training.

The interviewed employer representatives also pointed out the compliance of graduates' training with the modern development of medical practice and science, such as cytogenetics. Employers said that they themselves participate in the assessment of residents, as they are included in the examination committees. However, the educational organization did not conduct systematic feedback with them. Employers believe that such skills in residency graduates as conducting cytogenetic studies were the ones they wanted to see as the strongest.

Conclusions of the EEC on the criteria. Comply out of 9 standards (including 6 basic, 3 improvement standards): fully - 5/3, partially - 1/0, do not correspond - 0.

Recommendations for improvement:

- 1) To use assessment methods with determination of validity, reliability of control and measuring instruments (3.1).

Standard 4: RESIDENTS

4.1 Admission policy and selection

The educational organization has a policy for the admission of residents, which is called "Rules for admission to the residency of the MCH PAA RK". Approaches to the admission of residents are based on the requirements of the country and internal regulations, namely, the Constitution of the Republic of Kazakhstan; the Law of the Republic of Kazakhstan dated July 27, 2007 No. 319-III "On Education"; Order of the Ministry of Health of the Republic of Kazakhstan No. RK MOH-270/2020 dated December 15, 2020 "On approval of the rules for placing a state order, admission to training and training of medical personnel in residency"; Order of the Ministry of Education and Science of the Republic of Kazakhstan dated October 31, 2018 No. 600 "On approval of the Model rules for admission to training in educational organizations implementing educational programs of higher and postgraduate education"; Order of the Ministry of Health of the Republic of Kazakhstan No. 27 dated January 30, 2008 "On approval of the lists of clinical specialties for training in internship and residency" (with amendments and additions as of 05/14/2021). The transparency of the selection procedure and equal access to residency programs are confirmed by the document "Rules for admission to the residency of the MCH PAA RK".

The educational organization has created a barrier-free learning environment, including ramps, call buttons, elevators, and toilets for the disabled.

The appeal procedure based on the results of admission to residency is described in the "Rules for admission to the residency of the MCH PAA RK".

Representatives of students are included in the process of developing the policy for admission and selection of residents. Feedback is provided to residents on this issue.

The revision of the admission and selection policy, the number of residents is carried out annually; the responsibility for this is the department of professional education.

Thus, the experts validated the data according to **Standard 4**. In general, all criteria are met. The experts familiarized themselves with the documentation on the admission of residents.

4.2 Number of residents

For the period 2022-2024 3 residents were accepted to the EP in the specialty "Medical Genetics". The total number of residents graduating on the dates of the start of admission to the residency in the specialty "Medical Genetics" was 0 people. The educational organization analysed the need of practical health care for specialists in genetics and determined that the annual admission to the educational program of residency in the specialty "Medical Genetics" will be 1-2 people. This figure corresponds to resource capabilities.

4.3 Support and counselling of residents

The practice of academic counselling, personal support of residents and the development of not only professional skills were evaluated by experts through the website <https://bmcudp.kz/ru/science-and-education/otdel-nauki-i-professionalnogo-obrazovaniya/npr->

license/postupayushchim/obrazovatelnye-programmy/obrazovatelnye-programmy.html. The website also provides information about the clinical base implementing the EP. https://bmcudp.kz/ru/activities/diagnostika/laboratoriya-personalizirovannoy-genomnoy-diagnostiki.html?sphrase_id=360805. During interviews with residents and graduates, the following information was obtained that there is an analysis of unintentional incidents in the areas of legal security of resident doctors, transparency of the educational process, protection of personal data, and confidentiality principles, which is also carried out by specialists of the Department, who are constantly in touch with resident doctors and are ready to receive them in the Department on any issue, through communication via messengers WhatsApp, Instagram, in the form of requests to the Department's email addresses. In general, all Hospital staff adheres to the SOP "Rules for incident management and communication with patients", approved by order of the Director of the Hospital No. 397 dated November 19, 2020. For example, for the purpose of social support for residents, meals at a reduced price and transportation are organized. Financial support for residents is provided through the issuance of a scholarship.

To plan the career of residency graduates, consulting is carried out with the Academic staff. The employment rate of future graduates of the EP in the specialty "Medical Genetics" will be 100% in 2024 (preliminary, the graduate will be employed in the Medical and Genetic Consultation of the Karaganda Region).

4.4 Representation of residents

The following consultative and advisory bodies operate in the educational organization: the Academic Council, the Commission of Fatal Outcomes, in the work of which residents participate. While interviewing residents, experts found that residents have the opportunity to participate in the Academic Council.

4.5 Working conditions

Residents receive a monthly stipend in accordance with the document Decree of the Government of the Republic of Kazakhstan dated February 7, 2008 No. 116 "Rules for the appointment, payment and amount of state stipends for students in educational organizations", resident doctors studying under the state educational order are paid a stipend in the amount of 111,579 (one hundred eleven thousand five hundred seventy-nine) tenge. <https://adilet.zan.kz/rus/docs/P080000116>. Residents are given the opportunity to work outside of school hours. There is currently 1 out of 3 such residents in the specialty "Medical Genetics". In total, the educational organization has 3 clinical bases for training residents, and each hosts various events in which residents participate. For example, they can conduct cytogenetic studies, medical genetic counselling. As a rule, residents supervise 3-5 patients per day, and 12-20 people per month. Residents make thematic reports, such as "Modern methods of prenatal diagnostics". They can participate in health education work, including on new methods of prenatal diagnostics.

Under special circumstances, in accordance with paragraph 32 of the order of the Ministry of Education and Science of the Republic of Kazakhstan dated October 30, 2018 No. 595 "On approval of the Model rules for the activities of higher and (or) postgraduate education organizations" and the Academic Policy, the Hospital ensures the provision of academic leave caused by pregnancy (including maternity/paternity leave, childcare leave), illness, military service upon provision of supporting documents. An individual training program for residents is applied. This is enshrined in the document - Academic Policy of the Hospital.

For resident doctors reinstated from academic leave and continuing their studies, an IEP for training is drawn up based on the WC corresponding to the academic year, taking into account the difference in the curriculum. If the names of the disciplines, content and number of credits coincide, the disciplines are re-credited in agreement with the supervising department. Individual terms of work are established by the Department specialists in agreement with the mentor and are specified in the IEP.

Conclusions of the EEC on the criteria. Comply with 20 standards (including 14 basic, 6 improvement standards): fully - 14/6.

Standard 5: ACADEMIC STAFF

5.1 Recruitment and selection policy

Total numbers of employees in the specialty "Medical Genetics" 7, of which 4 are full-time teachers, 3 are part-time. The supervision of resident doctors can be carried out by specialists with an academic degree of Doctor of Medical Sciences, Candidate of Medical Sciences, PhD, with the highest medical category in the profile of training, for whom the main place of work is the Hospital, with scientific and pedagogical work experience of at least three years and clinical experience of at least five years. Mentoring of resident physicians may be provided by specialists with a Doctor of Medical Sciences, Candidate of Medical Sciences, PhD, with the highest medical category in their training profile, for whom the main place of work is the Hospital, and who have at least five years of clinical experience.

The sedateness is 1 Doctor of Medical Sciences, 3 people have the highest category, and 3 people have the first category. Residents in the specialty "Medical Genetics" are trained by the employees of the Laboratory of Personalized Genomic Diagnostics and 2 clinical bases.

The experts familiarized themselves with the job descriptions and the regulations on residency.

The experts familiarized themselves with the personnel policy, with the documents "Regulations on the clinical mentor", "Residency Regulations". The ratio of teachers to residents is 1:1.

The hospital implements a personnel training and development policy in accordance with Section 7 "Personnel Training and Development of the Human Resources Management Rules". The hospital strives to ensure continuity of knowledge and experience, focusing on the development and training of employees. Investments in training and development must meet the needs of the Hospital in achieving its strategic goals. The hospital creates a system of accessibility of accumulated knowledge and experience, encouraging employees to keep their knowledge up to date and transfer information in the event of rotation or dismissal. The Hospital develops mentoring; employees teach and share their accumulated skills and knowledge with their colleagues.

In order to organize personnel training, the Hospital performs the following functions:

- 1) planned and systematic training aimed at implementing strategic objectives;
- 2) development and implementation of training and knowledge management processes based on the needs of the Hospital;
- 3) selection and holding of seminars, trainings, creation and implementation of individual employee development plans;
- 4) development of an educational centre for the purpose of accumulating and transferring knowledge and skills within the Hospital.

The Hospital distinguishes the following personnel development goals:

- 1) increasing the labour potential of employees to solve personal problems and problems in the field of functioning and development of the Hospital;
- 2) increasing labour efficiency;
- 3) reducing staff turnover;
- 4) training the necessary management personnel;
- 5) education of young capable specialists;
- 6) achieving high competitiveness;
- 7) adaptation to new technologies.

In order to ensure high-quality training, the Hospital operates a system of advanced training and professional development of the Academic staff and personnel. The advanced training system in the Hospital is implemented in accordance with the Thematic Plan of Advanced Training Cycles for Doctors for 2024 and the Calendar Plan for Training Specialists for 2024 in accordance with the Order of the Ministry of Health of the Republic of Kazakhstan dated December 21, 2020 No RK MOH-303/2020 "On approval of the rules for additional and informal education of specialists in the field of

health care, qualification requirements for organizations implementing educational programs for additional and non-formal education in the field of health care, as well as the rules for recognizing the learning outcomes obtained by specialists in the field of health care through additional and non-formal education."

Training and advanced training of teachers / mentors is carried out through short-term courses and internships within the Republic of Kazakhstan and abroad.

Control and organization of advanced training cycles for Academic staff is carried out by the Department. Upon completion of advanced training, documents confirming the training are issued. In order to improve the quality of knowledge in the field of their professional competence, teachers/mentors are systematically informed about conferences held in their profile, about journals in which they can publish the results of their research, both in educational and scientific activities.

The department annually holds various educational events: trainings, master classes with the involvement of leading foreign specialists, mentoring with the involvement of foreign specialists. At the expense of the Hospital, doctors annually undergo training abroad, in cycles of advanced training, retraining of specialists and BLS courses. The Hospital has trained both its own specialists and those of other medical organizations of the Republic of Kazakhstan.

In order to verify the data of standard 5, external experts received the opinion of teachers on personnel policy. Interview with the head of the Laboratory of Personalized Genomic Medicine Abildinova G.Zh. included such issues as training and advanced training and allowed experts to learn about approaches to attracting clinical base staff for teaching (there are 7 such teachers in total), about the strategy and tactics of recruiting residents, information support for the educational program, and also to identify problems in the management and development of human resources, since most part-time workers do not have knowledge of teaching methods.

While surveying teachers, it was found that the majority (100%) are completely satisfied with the organization of work and the workplace in this educational organization. In this educational organization, teachers have the opportunity to engage in scientific work and publish the results of R&D - 100% completely agree. Satisfied with the work of the HR service - 100% completely agree. Satisfied with the salary - 100% completely agree.

5.2 Commitments and development of teachers

In order to verify the data of standard 5, at a meeting with the head of the HR department and during interviews with teachers, experts obtained an opinion on approaches to the development of pedagogical competence of teachers, motivation to work with residents, and the implementation of mentoring, which includes The academic staff for the 2023-2024 academic year includes 73 teachers / mentors in various areas of training in residency. <https://drive.google.com/drive/folders/14jxK8UYsRQdqksmwnKMVyEzNsjDa9EKp?usp=sharing>.

The experts determined that teachers and residents have enough time for teaching, mentoring and training.

The experts received responses about the advanced training program for teachers, which are held annually, and the teachers participating in the implementation of the educational program were trained in 2021-2023, including teachers of the accredited educational program in the specialty "Medical Genetics" - 4 people. These activities are financed by the educational organization. The expert checked the teachers' certificates on such topics as "Innovative Technologies in Education" from September 13 to 25, 2021; "Educational Technologies in the Residency Training Program" from November 13 to November 18, 2023.

Experts have found that teachers initiate research topics for residents stimulate the need for additional training and independent work with literature, medical documentation.

The educational organization has an opportunity for career growth and development of teacher competencies - 100% of surveyed teachers responded.

The organization implements social support programs for teachers - 100% responded that "yes, such programs exist", 100% "I have already used this".

Conclusions of the EEC on the criteria. Compliance with 8 standards (including 7 basic, 1 Standard of improvement): fully - 7/1.

Standard 6: EDUCATIONAL RESOURCES

6.1 Material and technical support and equipment

Residents are trained at the Hospital, including residents of the accredited educational residency program in the specialty "Medical Genetics" at the Hospital and 2 clinical sites, in the form of Multidisciplinary City Hospital No. 2 and City Perinatal Centre No. 2. The following premises are available for theoretical training: a classroom with 6 stationary computers with Internet access (electronic library), a small conference hall for 25 seats, a large conference hall for 159 seats, a hall in the department of the nuclear medicine centre for 20 seats, a classroom in block C2 (2nd floor) for 15 seats, as well as a classroom for emergency care courses (BLS, ACLS, PHTLS, PALS) for 25 seats for lectures and discussions with participants. All conference rooms are equipped with stationary video equipment, as well as a portable projector and laptop for conducting classes in departments, flip charts and whiteboards.

Practical training of resident doctors is carried out in the Laboratory of Personalized Genomic Diagnostics (Laboratory): a room for isolating nucleic acids, a room for preparing pure mixtures, an amplification room, a sequencing room and in the obstetrics and gynaecology department (the office of a geneticist in a polyclinic). The material and technical base of the educational process is maintained at a sufficient level and complies with sanitary standards, fire safety requirements.

In the L block of the Hospital on the 6th floor, there are freely available classrooms for resident doctors for classroom training. The classrooms are equipped with modern computers, projectors, necessary furniture, and interactive whiteboards. Also, a large and a small conference room with multimedia equipment are provided for the educational process. All efforts of the Hospital are aimed at maximum comfort and favourable conditions for the educational process.

The departments of the Hospital have staff rooms for practical and theoretical research and self-training of resident doctors.

To provide students with access to relevant professional literature and electronic databases, the Hospital has concluded a Joint Activity Agreement with NJSC "Astana Medical University", a Memorandum of Cooperation with AEO "Nazarbayev University", and an Agreement on Library and Information Services for 2024 with NJSC "Republican Scientific and Technical Library". Resident doctors of the Hospital can visit university reading rooms at any time, use professional literature and electronic information resources.

Residents can use Internet resources to access full-text articles and literary sources of databases. In 2024, the Hospital launched a pilot project to provide corporate access to ClinicalKey online resources. This is an extensive clinical source of information based on the principles of evidence-based medicine. Users of these resources (residents and medical workers) receive verified and regularly updated material in the professional field. The clinical departments of the Hospital have a library fund in the area of training. In the classroom of resident doctors there is access to information resources and databases, to bibliographic and full-text databases for independent work, online training of resident doctors.

Clinical departments are equipped with computers with Internet access, the ability to work in the "Infomed" program. Computers have access to the corporate data transmission network of the Hospital "GroupWise", to the Hospital website. <https://bmcudp.kz/ru/>

The hospital is equipped with the latest modern clinical diagnostic and therapeutic equipment, which makes a great contribution to the training, development of practical skills of resident doctors. All equipment is available for work, resident doctors are directly involved in using it for diagnostic, therapeutic purposes under the supervision of a mentor.

Residents are aware of this.

Before starting the relevant discipline of the educational program, the resident receives a syllabus from the teacher and knows what skills he should acquire and develop during the training.

6.2 Clinical bases

A review of the resources showed that they correspond to the goals and objectives of educational activities, for example, the clinical bases of the Multidisciplinary City Hospital No. 2 and the City Perinatal Centre No. 2 were visited, and the employees of the educational organization ensure collegial and ethical relationships with the medical staff, the management of the clinical base to achieve the final results of residents. A sufficient number of thematic patients is provided (for example, in 2023, over 5,000 pregnant women and 200 children with suspected congenital and hereditary pathology), modern equipment is demonstrated and is available to students; teachers provide high-quality education in compliance with ethics and deontology.

During a visit to the clinical bases (Multidisciplinary City Hospital No. 2 and the City Perinatal Centre No. 2), experts conducted a survey of the resources, their compliance with the training programs, accessibility for teachers and residents, how modern this equipment is and meets the needs of students and practical health care.

In order to validate the implementation of the self-assessment report data and obtain evidence of the quality of the programs, interviews were conducted with residents. The experts asked questions about satisfaction with training, sufficient time for patient supervision, work with medical documentation, satisfaction with teaching methods and the qualifications of teachers, social and moral support for residents in need, participation in "Journal Clubs", and the availability of resources of international databases of professional literature. In general, residents are satisfied with the training, assessment methods, and purposefully entered this organization, since they believe that the educational organization has good resources, image and international connections, at the same time, residents would like more independence in patient management, holding international events. There is a simulation centre equipped with equipment, residents can practice practical skills. The installed medical equipment allows the Hospital to be competitive at the international level, especially in the countries of Central Asia and the CIS. In order to improve practical skills, the Director of the Hospital approved the Work Plan of the educational training centre. The training centre includes a robotic surgery training centre (dry and veterinary laboratory), a neurosurgical training class, an expert cryoablation centre, a training class for emergency care courses (BLS, ACLS, PHTLS, PALS).

Providing emergency care to children with cardiopulmonary resuscitation is also included in the training program. In the classroom for emergency care courses (BLS, ACLS, PHTLS, PALS), instructors trained according to international AHA (American Heart Association) standards conduct training for resident physicians in emergency care courses BLS, ACLS, PHTLS, PALS with the issuance of a certificate valid for 2 years.

The Hospital departments implementing EP 7R01102 "Medical Genetics" are equipped with diagnostic equipment that meets the necessary requirements of practical activities and the process of training resident physicians.

The "Resources" section of EP 7R01102 "Medical Genetics" describes in detail the entire list of educational, laboratory, diagnostic equipment indicating the type, quantity and date of issue.

Residents demonstrated their commitment to the organization of education, were active in answering questions from external experts, and demonstrated their opinions on the organization of training, assessment of their skills, advisory support, opportunities to participate in research and development, and financing. The experts studied the residents' documents (portfolios, resident assessment results - checklists, resident survey results).

6.3 Information technology

The experts assessed the residents' and teachers' access to the necessary web resources, including the uninterrupted operation of the Internet, a local computer system, a system for video broadcasting lectures in classrooms, and the introduction of distance learning systems (Zoom, WebEx). The hospital has the following information and communication technologies and electronic media:

1. GroupWise - Mail server.

2. Novell IManager - Account server.
3. Mail KRK - File Server (for file exchange).
4. Messenger - Message server.
5. KavServer - Antivirus server.
6. MIS - medical information system.
7. PrintServer - print server (there are large printers that are in some departments).
8. WSUS - server for updating the Windows system.

Residents confirmed that they can use information resources, including while preparing for classes.

The educational process for residency is reflected in the AIS "Platonus", which was implemented to automate process management, based on the use of standardized electronic documents and the introduction of new educational information technologies in the process of managing the educational process. The entire AIS "Platonus" database is located on a server located in the Hospital and was fully commissioned in 2023. The system contains a centralized database that allows specialists of the Department and the Academic staff of the Hospital departments to automate their educational and methodological work, and resident doctors to receive the necessary information on the educational process.

In all departments of the Hospital, to simplify the interaction of structural divisions and business communication with colleagues, telephone communication lines with internal numbers are installed, corporate GroupWise mail is used for electronic correspondence, and KRK mail is used to store documentation of structural divisions.

The Hospital provides access to healthcare information resources and relevant patient data, patient supervision and work in the healthcare system for the provision of medical care by having a universal automation system for medical organizations InfoMed, which allows for the automation of patient data.

Also, electronic correspondence with resident doctors in WhatsApp and Instagram chats is actively used. The necessary information about the Hospital's residency is freely available and on the official website of the Hospital in the Department section <https://bmcudp.kz/ru/science-and-education/otdel-nauki-i-professionalnogo-obrazovaniya/otdel-professionalnogo-obrazovaniya.html> in the Residency section <https://bmcudp.kz/ru/science-and-education/otdel-nauki-i-professionalnogo-obrazovaniya/npr-license/rezidentura.html>

To ensure access of students and teachers to relevant professional literature, electronic databases, the Hospital has concluded a Memorandum of Cooperation with AEO "Nazarbayev University", an Agreement on Library and Information Services for 2024 with the NJSC "Republican Scientific and Technical Library", and a Memorandum with NJSC "Astana Medical University". <https://drive.google.com/drive/folders/14jxK8UYsRQdqksmwnKMYyEzNsjDa9EKp?usp=sharing>

Hospital residents can visit university reading rooms at any time, use professional literature and electronic information resources: <https://elib.amu.kz/ru/elib/>, <https://elibrary.ru/defaultx.asp>, <https://booksmad.info/>, <https://kitap.kz/>, <http://www.medinfo.ru/>, <https://pubmed.ncbi.nlm.nih.gov/>

6.4 Clinical teams

In order to develop the residents' experience of working in a team, the educational organization conducts such events as training in the Clinical and Diagnostic Department of the Hospital. Inter-professional interaction is also carried out through joint discussion of clinical cases.

In the questionnaire, residents noted that they have free access to patients at clinical sites and all the conditions for improving their practical skills - 100% of teachers completely agree with this.

6.5 Medical scientific research and achievements

The educational organization conducts research work in such areas as: oncogenetics, study of the microbiome, etc.

On the basis of the Hospital, 8 scientific projects have been successfully implemented, this year the implementation of 4 scientific projects is being completed:

- "Study of the effect of micro- and macronutrient consumption on health indicators in metabolic

syndrome" (2018-2020);

- "Development of a methodology for analysis using biochip systems in the differential diagnosis of lymphoproliferative diseases" (2018-2020);

- "Study of the therapeutic and dietary properties of mare's milk in chronic diseases of the digestive system" (2018-2020)

- "Study of the features of the genetic risk of diseases associated with metabolic syndrome" (2018-2020);

- co-execution as part of the program-targeted financing of KSMU on the topic "Study of gene polymorphisms associated with myocardial and carotid artery remodelling in arterial hypertension in individuals of the Kazakh population" (2018-2020);

- co-execution as part of the program-targeted financing of NSMU on the topic "Study of genetic markers of aggressive prostate cancer and breast cancer in individuals of the Kazakh population" (2018-2020);

- implemented as part of the program-targeted financing of NSMU "National Program for the Development of Personalized Medicine in the Republic of Kazakhstan for 2021-2023";

- AP14872367 "Evaluation of the prognostic value of structural variability of the genome for the development of coronary heart disease in type 2 diabetes mellitus in Kazakhs" (start October 2022);

- AP14871581 "Study of the species structure of intestinal microbiota in insulin resistance in the Kazakh population" (start October 2022);

- AP14871525 "Study of associations of some genotypes with the cardiovascular form of diabetic neuropathy in the Kazakh population" (start October 2022);

- under the agreement with the RSE on the REM "National Scientific Centre for Healthcare Development named after Salidat Kairbekova" of the Ministry of Health of the Republic of Kazakhstan dated June 26, 2023;

- with the implementation in the program-targeted financing on the topic "Development of new approaches to organizing and conducting clinical trials of drugs and medical devices in the Republic of Kazakhstan. Creation of a unified system for coordinating clinical trials in the Republic of Kazakhstan" (beginning in July 2023);

- BR18574160 "Development of innovative technologies that improve the efficiency of diagnostics and treatment of background and precancerous diseases of the cervix associated with the human papillomavirus" (beginning in January 2023).

Residents of the 2nd year of study are involved in the implementation of scientific work (or fragments). They perform such types of work as DNA extraction and other molecular genetic studies. All information about the scientific work is included in the resident's portfolio. The Hospital conducts scientific research in three relevant areas of medical genetics: including predisposition genes for cardiovascular diseases, the search for genes associated with cervical cancer, and the relationship between the species ratio of microorganisms and insulin resistance. A resident physician of EP 7R01102 "Medical Genetics" is taking part in the project "Study of the species structure of the intestinal microbiome in insulin resistance in the Kazakh population" with her mentor Abildinova G.Zh.,

The following events were held at the Hospital:

- scientific and practical conference with international participation "Interdisciplinary issues of allergology and immunology" on February 23-24, 2023;

- Republican scientific and practical conference with international participation "Modern trends in aggressive cardiology" on March 30-31, 2023;

- annual international conference "Treatment of cardiac arrhythmias and cardiac electrophysiology for cardiologists" October 13-14, 2023;

- International forum "Modern aspects of prenatal medicine" September 29-30, 2023;

- II National Congress of Respiratory Medicine "Respiratory Medicine of Kazakhstan: Evolution of Views and Solutions" with the support of the Ministry of Health of the Republic of Kazakhstan November 9-10, 2023;

- Congress of Therapists of Kazakhstan "Quality and Safety of Drug Therapy: World Trends and Standards" November 16-17, 2023;

- II Scientific and Practical Conference with International Participation "Interdisciplinary Issues of Allergology and Immunology" February 15-16, 2024.

At the Hospital, resident physicians of EP 7R01102 "Medical Genetics" are provided with access to laboratory equipment for conducting research: microscopes, thermal cyclers, centrifuges, Quant studio 5, Real-Time PCR System, vortexes, flow meter, sequencer.

An interview with 7 teachers, including 4 full-time teachers, showed that there are both successes and problems in education management, depending on a specific base (admission of residents to equipment, a sufficient number of subject patients, time for maintaining medical records, independent work).

6.6 Expertise in the field of education

Expertise in education includes is a systemic process. The policy for conducting quality expertise is provided for by the internal documents of the Hospital, the Academic Policy and the Regulation on the internal system for evaluating the quality of education in additional and non-formal education programs and residency.

The employees of the Department of Professional Education conduct annual monitoring of the quality of educational programs. The examination is carried out in the form of an analysis of the needs for specialists, an analysis of resident training methods, and the results allow us to draw conclusions about the quality of innovative changes in postgraduate education.

Resources for clinical training are updated annually.

6.7 Training in other institutions

The academic policy for training residents includes the possibility of training in alternative organizations if the existing clinical sites do not cover all the topics of the educational program. At the same time, residents in the specialty "Medical Genetics" are trained at the Multidisciplinary City Hospital No. 2 and the City Perinatal Centre No. 2, which have departments of medical and genetic counselling, ultrasound prenatal diagnostics, and a neonatal department. Residents study such disciplines of the educational program as "Medical and Genetic counselling" and "Genomic Medicine" at the specified clinical sites. The preparation of scientific publications is carried out under the supervision of a teacher and does not require additional sites for training. However, residents can participate in academic mobility within the country; for example, an agreement has been concluded with Astana Medical University, Karaganda Medical University, Semey Medical University, West Kazakhstan Medical University and abroad, as there is an agreement with the Asan and Samsung Medical Centre, the Leipzig Cardiology Centre.

14 agreements and memorandums have been concluded with organizations, universities, associations, including 3 international ones. Such cooperation allows introducing international cooperation into residency programs in the specialty of the accredited educational program.

Teachers of the educational organization actively participate in national and international events. Thus, teachers in the specialty "Medical Genetics" regularly take part in national and international conferences. Such participation allows applying the information received in the educational process.

Conclusions of the EEC on the criteria. Comply with 18 standards (including 11 basic, 7 improvement standards): fully – 11/7.

Standard 7: EDUCATIONAL PROGRAMME EVALUATION

7.1 Monitoring and evaluation mechanisms

Monitoring of the educational program includes systematic collection of information on the activities of the educational program, its characteristics and results; compliance with general principles, goals is carried out on a regular basis, which ensures transparency of the process and results. Annual analysis of the educational program will allow the educational organization to make

adjustments and improve the content. Initially, residency programs are studied and evaluated by receiving external reviews, passing an expert evaluation when registering the program in the Register of the Bologna Process Centre of the MSHE of the RK, receiving feedback from resident doctors, Academic staff and employers, as well as analysing the educational achievements of the resident doctor. EP 7R01102 "Medical Genetics" at the development and implementation stage received reviews from the First Vice-Rector of SKMA, Head of the Department of Biology and Biochemistry, PhD, Professor Yesirkepov M.M., from an external specialist, geneticist, head of the medical and genetic consultation department of the obstetric block of the MSE on the REM of the Multidisciplinary City Hospital No. 2 Zhumazhanova M.A.

<https://drive.google.com/drive/folders/14jxK8UYsRQdqksmwnKMVyEzNsjDa9EKp?usp=sharing>. Subsequently, the residency program was approved at a meeting of the Scientific and Clinical Council (SCC) of the Hospital (minutes No. 1 dated March 18, 2022). The quality of the educational program is regularly evaluated by the professional education department through a questionnaire.

While evaluating the program, the goals and objectives of training, the final learning outcomes (through resident assessment, independent examination) are taken into account. The implementation process of the educational program is evaluated through feedback from residents and teachers and the achievements of graduates. For example, a survey of residents on September 16, 2022, demonstrated the following: resident doctors want to master more practical skills, use their own library, study in a classroom with computers, and be sent on rotation to other clinical sites. An analysis of the questionnaire of resident doctors of the Hospital as of January 10, 2023 showed high satisfaction with the learning process. An analysis of the questionnaire of resident doctors of the Hospital as of December 2023 showed high satisfaction with the learning process, learning conditions, equipment of departments, relationships with teachers and mentors.

In the process of evaluating the quality of residency educational programs, it was found that, along with achievements, there are a number of problems and shortcomings, including the quality management system.

7.2 Feedback from teachers and residents

The Department collects feedback from teachers/mentors and resident physicians to determine their level of satisfaction with the content of the EP 7R01102 "Medical Genetics", organizes monitoring in the form of questionnaires, and appeals to the Head of the Department.

The Hospital has a Trust Box "For letters and appeals to the Director of the MCH PAA RK" for collecting feedback, where resident physicians can leave their suggestions, wishes, and complaints incognito. An important role in evaluating the EP is played by monitoring the achievement of the final training goals by residents.

The Department develops a Work Plan, which also indicates the survey plan, where it is specified who and when, in what form (paper, AIS "Platonus", Google form) will be surveyed. The plan is approved by the Deputy Director for Strategic Development, Science and Education.

Currently, the Hospital conducts a survey for teachers/mentors, employers, and residency graduates. A survey is conducted for resident physicians on the topics: "Satisfaction of resident physicians with the training process", "Satisfaction of resident physicians with research work", "Satisfaction of resident physicians with the creation of conditions for personal development and education".

The forms of the questionnaires are approved at a meeting of the SCC, and are reviewed and updated at meetings of the Academic Council. The survey is conducted twice a year (at the end of the first half of the year and at the end of the second half of the year). The results of the study of feedback from stakeholders are announced and discussed at meetings of departments and the Department.

Based on the results of the evaluation of the EP, the Department develops measures to improve the activities. The obtained data from the feedback analysis and the monitoring results are used to improve the training program for resident physicians; if necessary, changes and additions are made to the EP.

The Hospital's teachers/mentors are involved as experts to examine teaching methods and assess resident physicians for compliance with training requirements and the competencies obtained in accordance with the course of study. Resident physicians contact the Department, where they receive answers to their questions regarding the terms of the EP implementation. Representatives of resident physicians are included in working groups for program development in the supervising departments, where they participate in discussing the implementation of the residency EP.

In general, the use of feedback contributes to a better understanding of the current needs of students and teachers, and allows developing plans for further improving the quality of graduate training.

7.3 Results of residents and graduates

At the time of accreditation, there were no graduates in the specialty "Medical Genetics."

7.4 Involvement of stakeholders

The educational organization has approaches to involving teachers and residents in the evaluation of the educational program and monitoring its implementation. Thus, residents are included in the advisory body of the "Academic Council" and participate in the discussion of all issues of the educational process. The results of the educational program evaluation are announced at a meeting of the "Academic Council".

An interview with 1 employer was conducted online and included questions such as: knowledge of the university mission, participation in the development of the mission and proposals for the strategic plan, participation in the work of advisory bodies, satisfaction with the basic knowledge and skills of residents, participation in training residents through mentoring, providing the department and residents with the necessary resources for practical training and the formation of clinical thinking, problems of interaction with departments and universities in general, 100% employment of residency graduates, etc.

7.5 Procedure for approving educational programs

The educational organization has established a system for documenting the educational process, including approval of the educational program at a meeting of the Hospital's SCC, Protocol No. 1 dated March 18, 2022.

Since 2024, the Hospital has had an Academic Council whose powers include consideration and approval of issues of educational activities of the Hospital. The composition of the Academic Council is approved by the order of the Director.

Conclusions of the EEC on the criteria. Compliant with 10 standards (including 7 basic, 3 improvement standards): fully - 7/2, partially - 0/1, do not comply - 0

Recommendations for improvement:

- 1) To implement a quality management system in education.

Standard 8: MANAGEMENT AND ADMINISTRATION

8.1 Management

Residency training is conducted in accordance with the requirements of such regulatory rules regarding the admission of residents.

For the purpose of implementing the residency program, the Hospital is guided by the LSI of the Republic of Kazakhstan and approved internal documents of the Hospital, starting from the stage of admission of resident doctors and until the completion of training. While forming the contingent of students, the personnel and material and technical capabilities of the Hospital are taken into account.

Transparency of the management of the residency program in the Hospital is ensured by the functioning of a number of mechanisms, which include:

- the presence of the residency program, the structure of which includes the competencies of the graduate and the LO, the WC and the assessment of the achievements of students, the resources necessary for the implementation of the program, scientific achievements, academic staff, the graduate

end-of-course assessment procedure, approved by the SCC and included in the Register of the Bologna Process Centre of the MSHE of the RK;

- the presence of internal regulatory documents governing the process of implementing the residency program;

- the presence of collegial management bodies that include Hospital specialists, resident doctors, and representatives of practical healthcare;

- publication of information on the Hospital website.

The management system of EP 7R01102 "Medical Genetics" is carried out on the basis of the Hospital Charter, structure, Regulations on departments and job descriptions. The person responsible for the strategy for the development of postgraduate education is the Deputy Director for Strategic Development, Science and Education.

The implementation of EP 7R01102 "Medical Genetics" is controlled by the SCC, the Academic Council, carried out in the Laboratory, the Hospital outpatient clinic, external clinical bases, and is supported by the Department.

The EP is managed depending on the tasks and functions of the structural divisions, on the subordination and job responsibilities of the Hospital specialists:

- 1) Clinical Department - Department - SCC - Deputy Director - Director.

- 2) Division - Deputy Director - Director.

Transparency of the management and decision-making system is ensured by the minutes of the meetings of the advisory bodies with subsequent communication to all specialists of the Hospital.

Positive results of the end-of-course assessment of graduates of the EP in the field of health care allow them to receive a document on education and a certificate of a specialist in the field of health care. Upon completion of training, resident doctors of EP 7R01102 "Medical Genetics" are issued certificates of completion of residency of the state standard with the award of the qualification of "Physician Geneticist". The Hospital orders residency completion certificate forms from the Banknote Factory of the National Bank of the Republic of Kazakhstan.

8.2 Academic Leadership

The responsibilities and duties of the management and employees for postgraduate medical education are defined and assigned to the Head of the Professional Education Department, Yerzhanov F.N., and are fixed by orders and instructions of the Director of the Hospital; the Charter of the Hospital; the Regulation on the Professional Education Department and job descriptions of specialists.

The educational organization evaluates the management of the educational process and employees in relation to achieving the mission of the residency program, the expected final learning outcomes by conducting feedback with residents and teachers (see Section 7.2 of the report).

To the question in the questionnaire, "Do the organization's managers listen to your opinion regarding issues related to the educational process, research, and clinical work?", 100% of teachers answered that they do so systematically.

8.3 Training budget and resource allocation

The department responsible for planning and distributing finances in residency programs is the financial and economic block, directly managed by the Deputy Director for Finance and Digitalization and the Deputy Director for Administrative and Economic Affairs. The scope of duties, responsibilities and powers are reflected in the job descriptions approved by the Hospital administration.

A financial plan is drawn up annually, including a target budget for training.

A financial report is submitted annually, which is approved and demonstrates, among other things, the distribution of educational resources in accordance with needs and the coverage of all types of expenses for the implementation and development of the residency program.

8.4 Administration and Management

The Hospital has an administrative staff in its structure, which includes a block for strategic development, science and education.

The Hospital, as a single educational, scientific and production complex, includes: clinical, educational, scientific, production and other auxiliary services that have the status of structural

divisions. The main areas of activity and powers of structural divisions and advisory bodies are determined by the regulations on structural divisions.

Experts have established that the quality management system (QMS) is not fully implemented.

Evaluation of the administration and management of the educational process as a whole and the educational program of the residency in the specialty "Medical Genetics" is carried out by means of a questionnaire.

8.5 Requirements and regulations

The educational organization complies with the recommendations of national authorized bodies, including the Ministry of Science and Higher Education of the Republic of Kazakhstan and the Ministry of Health of the Republic of Kazakhstan. Thus, it is in accordance with the classifier of residency specialties (On approval). All educational programs are provided with relevant educational and methodological documents and teachers.

Conclusions of the EEC on the criteria. Comply with 11 standards (including 8 basic, 3 improvement standards): fully - 8/2, partially - 0/1, do not comply - 0.

Recommendations for improvement:

- 1) To introduce quality management into educational activities in postgraduate and additional education to systematize documentation, accounting, archiving and, in general, maintain effective recordkeeping (8.4).

Standard 9: CONTINUOUS RENEWAL

The procedure for updating the organizational structure is carried out in the form of regular analysis and evaluation of the quality system of educational and medical services, and in 2023, such changes as the expansion of clinical bases were made.

The training process for residents has been updated by introducing new technologies into the educational process, improving the quality of training for resident doctors in order to flexibly respond to market demands. The Hospital management strives to prevent emerging problems and their causes by improving the internal control and risk management system.

A Roadmap is drawn up annually for the implementation of the Development Concept for subordinate organizations of the MC PAA RK, one of which is the Hospital. The Department of Professional Education transfers educational services to practical healthcare of the Republic of Kazakhstan and oversees the improvement of the level of training of medical personnel of the Hospital.

The Hospital management conducts regular analyses of activities, structural divisions, prepares reports that are submitted for discussion to the MC PAA RK, the governing body of the Hospital. The Department's reports include the results of educational activities for the reporting period.

Conclusions of the EEC on the criteria. Comply with 2 standards (including 1 basic, 1 Standard of improvement): fully - 1/1.

Recommendations for improvement:

- 1) To ensure regular external and internal evaluation of the implementation of the "Medical Genetics" program by developing relevant regulations (for internal evaluation) and initiating feedback from international partners, a professional association (9.2).

CONCLUSION: during the external evaluation of the educational program, it was established that out of 114 standards (including 82 basic standards and 32 improvement standards), 111 accreditation standards demonstrate full compliance, including 81 basic standards and 30 improvement standards. 2 basic standards and 2 improvement standards were partially implemented. No non-compliance with standards was found.

Considering that the residency educational program in the specialty "Medical Genetics" is being re-accredited and the admission of residents is planned for 2024, in compliance with the

requirements of the Law on Education of the Republic of Kazakhstan, the educational organization initiated specialized (program) accreditation without a contingent of residents. Therefore, the tasks of the external expert commission included evaluating the readiness of the Hospital to accept residents, studying the existing principles and approaches to training residents, mechanisms for ensuring quality and managing the residency educational program using the example of other educational programs. Nevertheless, the EEC specifically studied the organization of training in the specialty "Medical Genetics", including documentation, Academic staff, educational resources and other important issues related to compliance with Accreditation Standards. The EEC concluded that, along with the achievements in training residents, including the expected effectiveness of training in the accredited educational program of residency in the specialty "Medical Genetics", there are a number of comments that the Hospital must eliminate within 2024.

Generalized conclusions of the expert:

According to Standard 1:

An undoubted advantage is the high material and technical base, infrastructure of the Hospital, social support for employees, including residents (the opportunity to work 0.5 of a rate, preferential prices for food, medical services, transportation on 6 routes by bus, English and Kazakh language courses, sports, etc.).

In addition, it should be noted that EP 7R01102 "Medical Genetics" was developed by a freelance geneticist of the Ministry of Health of the Republic of Kazakhstan, taking into account the proposals of stakeholders, based on an analysis of the needs of practical healthcare and the medical genetic service. Also international partnerships with research centres, university clinics of near and far abroad, which allows attracting leading foreign specialists to the educational process.

According to Standard 2:

A positive factor is the availability of a license to engage in educational activities and the fact that the residency program in the specialty 7R01102 "Medical Genetics" is accredited and included in the Register of the Bologna Process Centre of the MSHE of the RK. A credit system and an integrated learning approach are also used in the preparation of residents in the specialty "Medical Genetics" in accordance with the legislation of the Republic of Kazakhstan. While forming the catalogue of elective disciplines, the real needs of practical healthcare were taken into account.

According to Standard 3:

Assessment of the educational achievements of residents is carried out in compliance with the regulatory documents of the Republic of Kazakhstan, the Academic Policy of the Hospital. Particular attention is paid to assessing the development of the resident and his competencies: personal interest, professional competence, communication, personal qualities, scientific interest (through portfolio assessment). The use of the AIS "Platonus" promotes digitalization and transparency of resident assessment methods.

To further improve the educational process, it is recommended to improve the teaching methods and assessment of residents by teachers and mentors.

According to Standard 4:

The availability of the Hospital's internal regulatory documents (Residency Admission Rules, Residency Regulations, Academic Policy) complies with the ECAQA requirements; the availability of the Residency section on the Hospital website; free access of residents to providing medical care to the assigned population, as well as to the Hospital's simulation centres, access to clinical departments, functional and laboratory units of the Hospital; also, resident doctors are involved in and actively participate in the work of the Hospital's advisory bodies (CLI, Academic Council, department meetings).

Also worthy of attention is the relatively affordable cost of educational services provided by highly qualified personnel, and the receipt of a state educational order in residency.

According to Standard 5:

One of the main advantages of the Hospital is their academic staffs, which is represented by highly qualified specialists, experienced clinicians with scientific achievements, recognized not only in

the Republic of Kazakhstan, but also internationally, doctors providing innovative and high-tech medical services. The Hospital also regularly improves the qualifications and skills of doctors, including pedagogical competencies. The high publication activity of the Hospital staff deserves attention, which is encouraged and motivated by the Hospital administration.

According to Standard 6:

The availability of their own clinical base for the implementation of the residency program, the availability of agreements on joint activities with clinical bases (City Multidisciplinary Hospital No. 2 and City Perinatal Centre No. 2 to cover all types of medical and genetic care for the population), as well as the availability of a safe environment for residents not only in the Hospital, but also at the clinical bases deserve a positive evaluation. Both the Hospital and the clinical bases have the appropriate material and technical base (classrooms, clinical departments, access to electronic literature databases, computer classes, and a training centre).

According to Standard 7:

In accordance with the requirements for accreditation, monitoring of feedback from students, monitoring the quality of clinical bases, monitoring the quality of the residency program in the specialty "Medical Genetics" for compliance with regulatory documents of the Republic of Kazakhstan are carried out.

It is necessary to more actively involve residents in the advisory and collegial bodies of the Hospital.

According to Standard 8:

The stable financial condition of the Hospital and the responsibility of the academic management in relation to the development and management of the educational program, including the residency program in the specialty "Medical Genetics" deserve a positive evaluation.

To improve the educational process, it is necessary to provide funding for the academic mobility of residents and Academic staff, as well as internships for residents.

According to Standard 9:

The status of a highly specialized clinical base deserves a positive evaluation; the opening of new in-demand educational residency programs, the presence of international partnerships and cooperation agreements, and a Strategic Development Plan for the implementation of educational activities.

5. Recommendations for improvement of the educational program of residency in the specialty "Medical Genetics":

- 1) To use assessment methods with determination of the validity and reliability of control and measuring tools (3.1).
- 2) To introduce quality management into educational activities in postgraduate and additional education to systematize documentation, accounting, archiving and, in general, conduct effective recordkeeping (8.4).
- 3) To ensure regular external and internal evaluation of the implementation of the Medical Genetics program through the development of relevant regulations (for internal evaluation) and the initiation of feedback from international partners and the professional association (9.2).







6. Recommendation to the ECAQA Accreditation Council

The members of the EEC established the compliance of the educational program of the residency in the specialty "Medical Genetics" with the Accreditation Standards and came to a unanimous opinion to recommend that the ECAQA Accreditation Council to accredit this program for a period of 5 years.

	Full name
Chairman	Yermukhanova Lyudmila Sergeevna
International Expert (online)	Uryasev Oleg Mikhailovich
Academic Expert	Kasnova Saule Laikovna
Academic Expert	Yesenkulova Saule Askerovna
Academic Expert	Smailova Altynay Nagyzkhanovna
Academic Expert	Salimbaeva Damilya Nurgazievna
Employer Expert	Zhukubaeva Almira Asetkyzy
Student Expert	Nurgaliev Arslan Ardakovich

6. Рекомендация Аккредитационному совету ЕЦА

Члены ВЭК пришли к единогласному мнению рекомендовать Аккредитационному совету аккредитовать образовательную программу 7R01102 «Медицинская генетика» РГП «Больница Медицинского центра Управления делами Президента Республики Казахстан» на ПХВ на период 5 лет.

Председатель ВЭК	ЕРМУХАНОВА ЛЮДМИЛА СЕРГЕЕВНА	
Международный эксперт (онлайн)	ОЛЕГ МИХАЙЛОВИЧ УРЯСЬЕВ	
Академический эксперт	КАСЕНОВА САУЛЕ ЛАЙКОВНА	
Академический эксперт	ЕСЕНКУЛОВА САУЛЕ АСКЕРОВНА	
Академический эксперт	СМАИЛОВА АЛТЫНАЙ НАГЫЗХАНОВНА	
Академический эксперт	САЛИМБАЕВА ДАМИЛЯ НУРГАЗИЕВНА	
Эксперт-работодатель	ЖУКУБАЕВА АЛЬМИРА АСЕТКЫЗЫ	
Эксперт-обучающийся	НУРГАЛИЕВ АРСЛАН АРДАКОВИЧ	

Профиль качества и критерии внешней оценки образовательной программы (обобщение)

Стандарт	Критерии оценки	Количество стандартов	БС*/СУ	Оценка		
				Полностью соответствует	Значительно соответствует	Частично соответствует
1.	МИССИЯ И КОНЕЧНЫЕ РЕЗУЛЬТАТЫ	14	9/5	9/5		
2.	ОБРАЗОВАТЕЛЬНАЯ ПРОГРАММА	22	19/3	19/3		
3.	ОЦЕНКА РЕЗИДЕНТОВ	9	6/3	5/3	1/0	
4.	РЕЗИДЕНТЫ	20	14/6	14/6		
5.	АКАДЕМИЧЕСКИЙ ШТАТ/ПРЕПОДАВАТЕЛИ	8	7/1	7/1		
6.	ОБРАЗОВАТЕЛЬНЫЕ РЕСУРСЫ	18	11/7	11/7		
7.	ОЦЕНКА ОБРАЗОВАТЕЛЬНОЙ ПРОГРАММЫ	10	7/3	7/2	0/1	
8.	УПРАВЛЕНИЕ И АДМИНИСТРИРОВАНИЕ	11	8/3	8/2	0/1	
9.	НЕПРЕРЫВНОЕ УЛУЧШЕНИЕ	2	1/1	1/1		
		114	82/32	114		

Список документов, изученных членами ВЭЖ в рамках проведения внешней оценки образовательной программы резидентуры по специальности «Медицинская генетика»

№	Наименования документов/дата утверждения	Количество
1.	Академический календарь на 2022-2023 год	1
2.	Индивидуальный учебный план (ИУП) на 2022-2023 год	1
3.	Образовательная программа на 2022-2023 год	1
4.	Расписание на 2022-2023 год	1
5.	Рабочая учебная программа на 2022-2023 год	1
6.	Список групп на 2022-2023 год	1
7.	Академический календарь 1 год обучения на 2023-2024 год	1
8.	Академический календарь 2 год обучения на 2023-2024 год	1
9.	ИУП Аблайханова Н.	1
10.	ИУП Шадман Н.	1
11.	Образовательная программа на 2023-2024 год	1
12.	Расписание 2 год обучения на 2023-2024 год	1
13.	РУП на 2023-2024 год	1
14.	Список групп 1 год обучения на 2023-2024 год	1
15.	Список групп 2 год обучения на 2023-2024 год	1
16.	Отчет за 12 месяцев 2023 года медико-генетического кабинета Городского перинатального центра №2	1
17.	Рецензия 1 на ОП	1
18.	Рецензия 2 на ОП	1