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ANALYSIS OF THE CONDUCT OF AN INDEPENDENT EXAMINATION AT THE POSTGRADUATE LEVEL DURING PANDEMIC

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Abstract

Introduction: Postgraduate medical education is an important condition for the successful development of healthcare and quality medical care. Practice-based learning is the main goal of postgraduate level education. In the context of the COVID-19 pandemic, a qualified and competent resident doctor plays a crucial role for the country's health needs. The pandemic has shown both negative and positive effects on postgraduate medical education. In order to achieve the necessary level of qualification and competence of future doctors, it is necessary to develop new training programs adapted to the current conditions of the pandemic. The results of the independent examination of residents who studied during the pandemic to a certain extent reflect the level of training of future doctors of practical healthcare.

Aim of research: Conduct an analysis of the independent examination of the residents of Non-commercial Joint-stock Company «Medical University Semey» who studied during the pandemic.

Materials and methods: Statistical processing of the results of independent attestation of 292 residents graduated in 2020-2021 academic year was carried out in 21 specialties. The final exam consisted of theoretical and practical parts.

Results: According to the results of the first stage of the examination, 97 (29.1%) received an "excellent" grade, a "good" grade - 180 (65%), "satisfactory" - 13 (5.3%), unsatisfactory - 2 (0.7 %). The average test score in all specialties was 81.7% (B), which is slightly lower than in the past (2019-2020) 84.54% (B) by 2.8%. According to the results of the practical part of the independent examination of residents, the average score in all specialties was 93.2, the quality indicator was 100%. According to the results of the state certification of residents in all specialties of residency (theoretical and practical part), the average indicator was 3.28 (86.9%), B, which is slightly lower than in the last 2019-2020 academic year.

Conclusion: The analysis of the results of the independent examination of the residents of the Non-commercial Joint-stock Company «Semey Medical University», who studied in the context of a pandemic, showed a sufficient level of theoretical and practical training. To further improve the training of residents, it is necessary to develop academic mobility and internships, expand cooperation with other medical institutions, constantly improve the pedagogical and clinical qualifications of teachers and clinical mentors, and improve material and technical equipment.

Keywords: independent examination, residency, pandemic.

Резюме

АНАЛИЗ ПРОВЕДЕНИЯ НЕЗАВИСИМОЙ ЭКЗАМЕНАЦИИ НА ПОСТДИПЛОМНОМ УРОВНЕ В ПЕРИОД ПАНДЕМИИ

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Введение: Послевузовское медицинское образование – важное условие успешного развития здравоохранения и качественной медицинской помощи. Обучение, основанное на практике, является главной целью обучения на постдипломном уровне. В условиях пандемии COVID-19 квалифицированный и компетентный врач-резидент играет решающую роль для потребностей страны в области здравоохранения. Пандемия оказала как негативное, так и позитивное влияние на постдипломное медицинское образование. Для достижения необходимого уровня квалификации и компетентности будущих врачей необходимо разрабатывать новые учебные программы, адаптированные к текущим условиям пандемии. Результаты независимой экзаменации резидентов, обучавшихся в период пандемии, в определенной степени отражают уровень подготовки будущих врачей практического здравоохранения.

Цель исследования: Провести анализ независимой экзаменации резидентов НАО «Медицинский университет Семей», обучавшихся в период пандемии.

Материалы и методы: Проведена статистическая обработка результатов независимой аттестации 292 резидентов, закончивших обучение в 2020-2021гг. по 21 специальностям. Итоговый экзамен состоял из теоретической и практической части.

Результаты: По результатам первого этапа экзаменации оценку «отлично» получили - 97 (29,1%), оценку «хорошо» - 180 (65%), «удовлетворительно» -13 (5,3%), неудовлетворительно» - 2 (0,7%). Средний балл тестирования по всем специальностям составил 81,7% (В), что несколько ниже по сравнению с показателем прошлого (2019-2020гг) 84,54% (В) на 2,8%, качественный показатель (КП) 95,6%, относительный показатель (ОП)

99,3%. По результатам практической части независимой экзаменации резидентов средний балл по всем специальностям составил 93,2, качественный показатель - 100%. По итогам государственной аттестации резидентов по всем специальностям резидентуры (теоретическая и практическая часть) средний показатель составил – 3,28 (86,9%), В, что несколько ниже чем в прошлом 2019-2020 учебном году: средний балл – 3,33 (89,5%), В+. Качественный показатель – 100%.

Выводы: Анализ итогов независимой экзаменации резидентов НАО «МУС», обучавшихся в условиях пандемии, показал достаточный уровень теоретической и практической подготовки. Для дальнейшего совершенствования обучения резидентов необходимо развивать академическую мобильность и стажировки, расширить сотрудничество с другими лечебными учреждениями, постоянно повышать педагогическую и клиническую квалификацию преподавателей и клинических наставников, улучшать материально-техническое оснащение.

Ключевые слова: независимая экзаменация, резидентура, пандемия.

Түйіндеме

ПАНДЕМИЯ КЕЗІНДЕ ДИПЛОМНАН КЕЙІНГІ ДЕҢГЕЙДЕГІ ТӘУЕЛСІЗ ЕМТИХАН ӨТКІЗУДІ ТАЛДАУ

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Кіріспе: Жоғары оқу орнынан кейінгі медициналық білім – денсаулық сақтау мен сапалы медициналық көмектің табысты дамуының маңызды шарты. Тәжірибеге негізделген оқыту дипломнан кейінгі оқытудың негізгі мақсаты болып табылады. COVID-19 пандемиясы жағдайында білікті және құзыретті резидент дәрігер елдің денсаулық сақтау қажеттіліктері үшін шешуші рөл атқарады. Пандемия дипломнан кейінгі медициналық білімге теріс және оң әсер етті. Болашақ дәрігерлердің біліктілігі мен құзыреттілігінің қажетті деңгейіне жету үшін қазіргі пандемия жағдайларына бейімделген жаңа оқу бағдарламаларын әзірлеу қажет. Пандемия кезінде оқыған резиденттердің тәуелсіз емтихан нәтижелері белгілі бір дәрежеде болашақ практикалық денсаулық сақтау дәрігерлерінің дайындық деңгейін көрсетеді.

Зерттеудің мақсаты: Пандемия кезінде оқыған Семей медицина университетінің резиденттерінің тәуелсіз сараптамасына талдау жасаңыз.

Материалдар мен әдістер: 21 мамандық бойынша 2020-2021 жылдары бітірген 292 тұрғынды тәуелсіз аттестаттау нәтижелерін статистикалық өңдеу жүргізілді. Қорытынды емтихан теориялық және практикалық бөлімдерден тұрды.

Нәтижелер: Емтиханның бірінші кезеңінің қорытындысы бойынша 97 (29,1%) «өте жақсы», «жақсы» баға - 180 (65%), «қанағаттанарлық» - 13 (5,3%), қанағаттанарлықсыз - 2 алды (0,7 %). Барлық мамандықтар бойынша тестілеудің орташа балы 81,7% (В) болды, бұл бұрынғыға қарағанда (2019-2020 оқу жылы) 84,54% (В) 2,8%-ға сәл төмен. Резиденттердің тәуелсіз емтиханының практикалық бөлімінің нәтижелері бойынша барлық мамандықтар бойынша орташа балл 93,2, сапа көрсеткіші 100% құрады. Резидентураның барлық мамандықтары бойынша резиденттерді мемлекеттік аттестаттау нәтижелері бойынша (теориялық және практикалық бөлім) орташа көрсеткіш 3,28 (86,9%), В болды, бұл өткен 2019-2020 оқу жылындағы көрсеткіштен сәл төмен.

Қорытындылар: Пандемия жағдайында оқыған «ХҚК» КЕАҚ резиденттерінің тәуелсіз сараптамасының нәтижелерін талдау теориялық және практикалық дайындықтың жеткілікті деңгейін көрсетті. Резиденттерді даярлауды одан әрі жақсарту үшін академиялық ұтқырлық пен тағылымдаманы дамыту, басқа медициналық мекемелермен ынтымақтастықты кеңейту, мұғалімдер мен клиникалық тәлімгерлердің педагогикалық және клиникалық біліктілігін үнемі жетілдіру, материалдық техникалық жабдықтауын жетілдіру қажет.

Түйінді сөздер: тәуелсіз сараптама, резидентура, пандемия.

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Introduction.

Postgraduate medical education is an important condition for the successful development of healthcare and quality medical care. After completing the residency, graduates are admitted to clinical practice [10]. Practice-based learning is the

main goal of postgraduate level education. In the context of the COVID-19 pandemic, a qualified and competent resident doctor plays a crucial role for the country's health needs [4,5,9]. The pandemic has had both a negative and a positive impact on postgraduate medical education.

The negative aspects of the pandemic: a reduction in the number of patients in polyclinics and hospitals, disruptions in the work of clinical departments, cancellation of outpatient and inpatient services, reduction of operations and procedures, etc. Research work, mentoring, and scientific conferences have been canceled or suspended. However, this pandemic has offered new training modes, such as teleconsultations, videoconferences, etc. To achieve the necessary level of qualification and competence of future doctors, it is necessary to develop new training programs adapted to the current conditions of the pandemic [1,3]. In Kazakhstan, postgraduate medical education is specialized, based on the state mandatory standard. In the NAO «Semey Medical University» (NJSC "SMU"), the educational residency programs of all specialties are based on the final results of training. The results of the independent examination of residents who studied during the pandemic, to a certain extent reflect the level of training of future practical healthcare doctors.

Aim. Conduct an analysis of the independent examination of residents of NJSC «SMU» who studied during the pandemic.

Material and methods of research.

In the 2020-2021 academic year, 292 residents completed their studies and passed the state certification in 21 specialties. The theoretical and practical part of the final examination of residents was conducted by the National Center for Independent Examination (NCIE). Statistical processing of the results of independent certification of residents who completed their studies in 2020-2021 was carried out.

Research results. The final state certification of residents of NJSC "SMU" in the 2020-2021 academic years

was carried out in the following stages: 1. Determining the level of theoretical training in the disciplines in the form of testing. 2. Certification of practical skills with a standardized patient according to the methodology of a mini-clinical examination (MCE) using standardized patients (SP) in the conditions of the Educational and Clinical Center of the NJSC «SMU», in the Morgue of the Semey branch of the Center for Forensic Examinations, the University Hospital (UH) of the NJSC «SMU». The assessment was conducted by teachers online on the website of the National Center for Independent Examination (NCIE).

In the 2020-2021 academic year, 292 residents completed their studies and passed the state certification in 21 specialties: «Obstetrics and gynecology, including children's» (39), «Psychiatry» (19), «Family Medicine» (53), «Oncology, including children's» (1), «Radiology» (14), «Radiation Therapy» (3), «Pediatrics» (7), «Pulmonology, including children's» (4), «Anesthesiology and resuscitation, including children's» (23), «Therapy» (10), «Traumatology and orthopedics, including children's» (18), «Neontology» (10), «Infectious diseases, including children's» (6), «Pediatric surgery» (6), «General surgery» (14), «Cardiology, including children's» (14), «Dermatovenereology, including children's» (7), «Ophthalmology, including children's» (24), «Urology and andrology, including children's» (8), «Gastroenterology, including children's» (1), «Neurology, including children's» (9), «Maxillofacial surgery, including children's» (3).

07.12.2021 independent testing of residents was carried out online through the NCIE website. The results of testing residents in all specialties are presented in Table 1.

Table 1. Results of final testing of residents.

№	Specialty	Total residents	Medium Rate (%)	Excellent (abs/%)	Good (abs/%)	Satisfactory (abs/%)	Unsatisfactory (abs/%)
1	Oncology	1	79	0	1/100	0	0
2	Pediatrics	7	66	0	5/71,4	2/28,5	0
3	Neontology	10	80,5	1/10	9/90	0	0
4	Psychiatry	19	77,3	0	17/89,4	2/10,5	0
5	Pulmonology, including children's	4	70,8	0	4/100	0	0
6	Radiology	14	86,1	5/35,7	9/64,2	0	0
7	Radiation Therapy	3	77,7	0	3/100	0	0
8	Neurology, including children's	9	91,7	6/66,6	3/33,3	0	0
9	Obstetrics and gynecology, including children's	39	76	0	39/100	0	0
10	Anesthesiology and resuscitation, including children's	23	79,9	4/17,3	17/73,9	1/4,3	1/4,3
11	Traumatology and orthopedics, including children's	18	90,1	14/77,7	4/22,2	0	0
12	Infectious diseases, including children's	6	90,7	2/83,3	4/66,6	0	0
13	Urology and andrology, including children's	8	68,7	1/12,5	5/62,5	2/25	0
14	Cardiology, including children's	14	85,7	3/21,4	11/78,5	0	0
15	Dermatovenereology, including children's	7	95,8	7/100	0	0	0
16	Ophthalmology, including children's	24	94,8	22/91,6	2/8,33	0	0
17	Therapy	10	66,3	0	7/70	2/20	1/10
18	Family Medicine	53	87,9	27/50,9	23/43,3	3/5,7	0
19	Pediatric surgery	6	81,8	0	5/83,3	1/16,6	0
20	General surgery	14	94,5	5/35,7	9/64,2	0	0
21	Maxillofacial surgery, including children's	3	75,3	0	3/100	0	0
	Total	292	81,7	97/29,1	180/65	13/5,3	2/0,7

According to the results of the first stage of the examination, out of 292 residents, 97 (29,1%) received «excellent», «good» - 180 (65%), «satisfactory» - 13 (5,3%), «unsatisfactory» - 2 (0,7%). The best test results were shown by residents in the specialties «Dermatovenereology, including children's» (95,8), «Ophthalmology, including children's» (94,8), «General surgery» (94,5). The average

test score in all specialties was 81,7% (B), which is slightly lower compared to the previous indicator (2019-2020) of 84,54% (B) by 2,8%, a quality indicator (QI) of 95,6%, relative indicator (RI) 99,3%. In general, it should be noted that residents have a sufficient level of theoretical knowledge.

The results of the practical part of the final certification of residents in all specialties are presented in Table 2.

Table 2.

The result of the practical part of the final certification of residents.

	Specialty	Average score	%
1	Obstetrics and gynecology, including children's	3,33	89,1
2	Anesthesiology and resuscitation, including children's	3,67	92,4
3	Oncology, including children's	3,67	94
4	Psychiatry	3,0	80,5
5	Therapy	3,33	88,2
6	Radiology	4,0	96,6
7	Radiation Therapy	4,0	100
8	Pediatrics	2,33	70,8
9	Pediatric surgery	4,0	95,8
10	Infectious diseases, including children's	3,67	94,2
11	Pulmonology, including children's	4,0	100
12	Neurology, including children's	4,0	95,9
13	Family Medicine	3,67	91,8
14	Neontology	4,0	95,2
15	Dermatovenereology, including children's	4,0	97
16	Traumatology and orthopedics, including children's	3,33	87,4
17	Urology and andrology, including children's	4,0	99
18	Ophthalmology, including children's	4,0	95
19	Cardiology, including children's	4,0	100
20	General surgery	3,67	94,3
21	Maxillofacial surgery, including children's	4,0	100
	Total	3,7	93,2

The results of the practical part of the independent examination (IE) of residents showed a fairly high level of training of residents. The best results were shown by residents in the specialties «Radiation Therapy» (100), «Cardiology, including children's» (100), «Pulmonology,

including children's» (100), «Maxillofacial surgery, including children's» (100). The average score for all specialties was 93,2, the quality indicator was 100%.

The results of the final certification of residents in all specialties are presented in Table 3.

Table 3.

Results of the final certification of residents

Специальность	Оценка итогового контроля				Итоговая оценка			Традиц. оценка
	Тестовый экзамен		Практич. экзамен		Цифровой эквивалент	%	Бальный эквивалент	
	балл	%	балл	%				
Pediatrics	2,0	66	2,33	70,8	2,0	68,4	C	3
Family medicine	3,33	87,9	3,67	91,8	3,33	89,8	B+	4
Neontology	3,0	80,5	4,0	95,2	3,33	87,8	B+	4
Oncology, including children's	2,67	79	3,67	94	3,33	86,5	B+	5
Obstetrics and gynecology, including children's	2,67	76,3	3,33	89,1	3,0	82,7	B	4
Traumatology and orthopedics, including children's	3,0	81,1	3,33	87,4	3,0	84,3	B	4
Radiology	3,33	86,1	4,0	96,6	3,67	91,3	A-	5
Radiation therapy	2,67	77,7	4,0	100	3,33	88,8	B+	4
Psychiatry	2,67	77,3	3,0	80,5	2,67	78,9	B-	4
Anesthesiology and resuscitation, including children's	2,67	79,9	3,67	92,4	3,33	86,2	B+	4
Infectious diseases, including children's	3,33	88	3,67	94,2	3,67	91,1	A-	5
Urology and andrology, including children's	2,33	70	4,0	99	3,33	88,3	B+	4
Cardiology, including children's	3,33	85,7	3,67	94	3,0	84,8	B	4
Pulmonology, including children's	2,33	70,7	4,0	100	3,33	85,4	B+	4
Dermatovenereology, including children's	4,0	95,8	4,0	97	4,0	96,4	A	5
Ophthalmology, including children's	3,67	94,7	3,67	91,2	4,0	93	A-	5
Neurology, including children's	3,67	91,7	4,0	95,9	3,67	93,8	A-	5
General surgery	3,67	94,5	3,67	94,3	3,67	94,4	A-	5
Pediatric surgery	3,0	81,8	4,0	95,8	3,33	88,8	B+	4
Maxillofacial surgery, including children's	2,67	75,3	4,0	100	3,33	87,7	B+	4
Therapy	2,0	66,3	3,33	88,2	2,67	77,2	B-	4
Total	2.95	81.2	3.66	92.7	3.28	86.9	B	4

According to the results of the state certification of residents in all specialties of residency (theoretical and practical part), they showed a good level of training. The highest scores were scored by residents in the specialties «Dermatovenereology, including pediatric» (96,4), «Ophthalmology, including pediatric» (93), «General surgery» (94,4), «Neurology, including pediatric» (93,8). For all specialties, the average score was 3,28 (86,9%), B, which is slightly lower than in the previous 2019-2020 academic year: the average score was 3,33 (89,5%), B+. Qualitative indicator - 100%.

Discussion.

The priority goal of any university is to ensure its competitiveness in the market of educational services. Standards for specialized accreditation of postgraduate training of doctors in residency have been developed in accordance with the Code "On the health of the people and the healthcare system"; Laws of the Republic of Kazakhstan "On Education", "On Technical Regulation", regulatory documents of the Ministry of Health and Social Development of the Republic of Kazakhstan; international standards of the world federation of medical education to improve the quality of postgraduate medical education, European standards and guidelines, taking into account national and regional needs and priorities of the healthcare system Kazakhstan [10]. For comparison, difficult, competitive conditions are initially created in Israel [10]. The exam in Kazakhstan is conducted by testing or interviewing, assessing only cognitive competencies. In Israel, each resident must complete scientific work in a basic discipline, have a rotation of at least 6 months in related disciplines. Residents are constantly on duty in the department and emergency room. The resident receives permission for duty after passing the resuscitation exam [7]. Residents study literature in English [6]. To obtain a specialist license, you must pass 2 stages of the licensing exam. The first stage is carried out in the form of test tasks, the second - in the form of an oral exam, consisting of 4 sections, which is taken by two leading experts in this field [8]. Managers and doctors in clinics necessarily participate in scientific research at the international level [1]. Kazakhstan requires reforming postgraduate education, focusing on the procedure for admission to residency, strengthening the scientific component in training, effective interaction between medical universities and medical organizations, changing the format of independent examination [10].

Conclusions.

An analysis of the results of an independent examination of NJSC ICC residents who studied during the pandemic showed a sufficient level of theoretical and practical training, however, in a number of specialties it is necessary to strengthen the level of theoretical training - "Pediatrics", "Anesthesiology and resuscitation, including children's", "Therapy". To further

improve the training of residents, it is necessary to develop academic mobility and internships, expand cooperation with other medical institutions, constantly improve the pedagogical and clinical qualifications of teachers and clinical mentors, and improve the material and technical equipment.

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