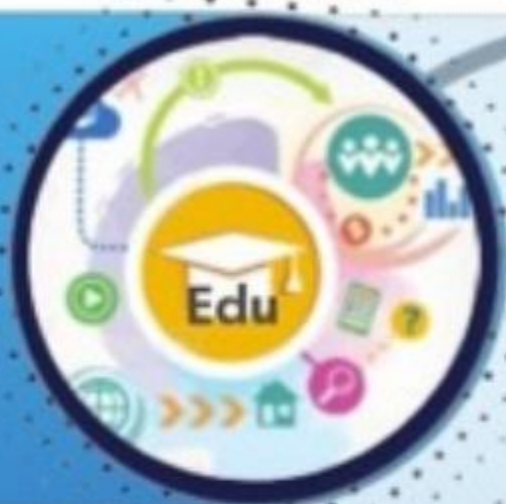




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ASSESSMENT OF THE EFFECTIVENESS OF USING INNOVATIVE METHODS IN PERINATAL CARE

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ABSTRACT.

Objective: to assess the quality of medical services at the Republican Perinatal Center (RPC). **Material and methods.** Published materials are summarized, which present the results of the implementation of a number of new technologies for the management of pregnant women, women in labor and postpartum women with a high risk of obstetric complications, introduced in the RPC since 2016. A clinical and statistical analysis of the annual reports of the RPC for the period 2017-2024 was carried out. **Results.** The effectiveness of perinatal care was assessed based on the main indicators of a level 3 center (survival of newborns by weight category, perinatal mortality). **Conclusions.** The introduction of new technologies for diagnosis, prevention, and treatment of obstetric complications in the perinatal center helps to timely identify the pathology of pregnant women, improve antenatal care for high-risk pregnant women and women in labor, and have reduced perinatal mortality. In the future, a differentiated approach to the implementation of innovative technologies in regional and inter-district perinatal centers will have important practical significance.

Key words: perinatal care, women, new technologies, perinatal mortality

ОЦЕНКА ЭФФЕКТИВНОСТИ ИСПОЛЬЗОВАНИЯ ИННОВАЦИОННЫХ МЕТОДОВ В ПЕРИНАТАЛЬНОЙ ПОМОЩИ

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АННОТАЦИЯ

Цель: провести оценку качества оказания медицинских услуг в Республиканском перинатальном центре (РПЦ). **Материал и методы.** Обобщены опубликованные материалы, в которых приводятся результаты внедрения целого ряда новых технологий по ведению беременных, рожениц и родильниц с высоким риском акушерских осложнений, внедренных в РПЦ с 2016 года. Проведен клинико-статистический анализ годовых отчетов РПЦ за период 2017-2024гг. **Результаты.** Эффективность перинатальной помощи оценена на основании основных показателей центра 3 уровня (выживаемость новорожденных по весовым категориям, перинатальная смертность). **Выводы.** Внедрение в перинатальном центре новых технологий диагностики, профилактики, лечения акушерских осложнений помогает своевременно выявлять патологию беременных, совершенствовать антенатальную помощь

беременным и роженицам высокого риска, позволили снизить перинатальную смертность. В дальнейшем важную практическую значимость будет иметь дифференцированный подход к внедрению инновационных технологий в региональных и в межрайонных перинатальных центрах.

Ключевые слова: перинатальная помощь, женщины, новые технологии, перинатальная смертность.

PERINATAL YARDIMDA INNOVATSION USULLARDAN FOYDALANISH SAMARALIGINI BAHOLASH

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Maqsad: Respublika perinatal markazida (RPM) ko'rsatilayotgan tibbiy xizmatlar sifatini baholash. Materiallar va usullar. Maqolada 2016 yildan beri rus pravoslav cherkovida joriy etilgan homilador ayollar, tug'ruqdagi ayollar va tug'ish davridagi ayollarni boshqarish bo'yicha bir qator yangi texnologiyalarni joriy etish natijalarini aks ettiruvchi nashr etilgan materiallar umumlashtiriladi. Natijalar. Perinatal yordam samaradorligi 3-darajali markazning asosiy ko'rsatkichlari (og'irlik toifasi bo'yicha yangi tug'ilgan chaqaloqlarning omon qolishi, perinatal o'lim) asosida baholandi. Xulosa. Perinatal markazda akusherlik asoratlari diagnostikasi, profilaktikasi va davolashning yangi texnologiyalari joriy etilgani homilador ayollardagi patologiyalarni tezkor aniqlash, xavfli toifadagi homilador va tug'ruq bosqichidagi ayollarga antenatal yordam ko'rsatishni yaxshilash, perinatal o'limni kamaytirish imkonini bermoqda. Kelgusida viloyat va tumanlararo perinatal markazlarda innovatsion texnologiyalarni joriy etishga tabaqalashtirilgan yondashuv muhim amaliy ahamiyatga ega bo'ladi.

Kalit so'zlar: perinatal yordam, ayollar, yangi texnologiyalar, perinatal o'lim.

Introduction. For all countries of the world, protecting the reproductive health of the population is a priority problem in the field of health care [1,2]. At the same time, improving the quality of medical care is a fundamental principle for reducing maternal and infant mortality. In recent decades, the activities of WHO have been aimed at achieving this goal, this is evidenced by such documents adopted in recent years as the "Global Strategy for Women's, Children's and Adolescents' Health (2016–2030)" [3], "Global Action Report on Preterm Birth".

The formation of a three-level system of providing medical care to women during pregnancy, childbirth, the postpartum period and newborns is currently a state priority. Perinatal centers, according to the order of the Ministry of Health of the Republic of Uzbekistan No. 185 of 2017 "On the regionalization of perinatal care in the Republic of Uzbekistan" [4], are institutions of the highest - 3rd level of perinatal care, and provide specialized and high-tech diagnostic, therapeutic and preventive care to pregnant women, women in labor, women in labor and newborns in a specific region of the country. One of the main areas of perinatology is the prevention and early diagnosis of pregnancy complications affecting the fetus [4].

In the Republic of Uzbekistan, the basis of the perinatal service was the organization of the city (1996) and Republican (2002) perinatal centers in Tashkent [5]. In 2010, in accordance with the order of the Ministry of Health of the Republic of Uzbekistan No. 378 "On the organization of perinatal centers and measures to further improve the activities of maternity institutions", the Republican Perinatal Center of the Republic of Karakalpakstan (RPC RK) and 12 regional perinatal centers were organized. Currently, in accordance with the order of the Ministry of Health of the Republic of Uzbekistan No. 151 dated 06.28. 2021, 71 level 3 institutions have been created, including 46 inter-district perinatal centers.

The main goal of perinatal obstetrics is to maintain the health of the mother and help her give birth to a healthy child [6]. The modern tasks of the maternal and child health service at the stage of its ongoing reform dictate the need to analyze the results of perinatal care. The literature available to us does not sufficiently cover the issues of the state of perinatal service in Uzbekistan in level 3 institutions, its achievements and missed opportunities [7].

This situation has necessitated the study of the role of innovative methods and techniques proposed and developed by the staff of the Republican Perinatal Center (RPC) to improve the quality of obstetric care for women in the perinatal period.

OBJECTIVE:

to assess the quality of medical services provided at the Republican Perinatal Center

MATERIAL AND METHODS.

The article summarizes published materials that present the results of the implementation of new technologies for the management of pregnant women, women in labor and postpartum patients with a high risk of obstetric complications in the Republican Perinatal Center since 2016. The effectiveness of perinatal care was assessed based on the clinical and statistical analysis of the annual reports of the RPC for the period 2017-2024.

RESULTS AND DISCUSSION.

The Republican Perinatal Center provides antenatal care to pregnant women with a complicated obstetric and gynecological history: miscarriage, with a scar on the uterus, with infertility, perinatal losses in the anamnesis, the birth of children with developmental anomalies, with complications during previous pregnancies. Doctors monitor women in case of complications of the current pregnancy: threat of termination, multiple pregnancy, rhesus conflict, after IVF, intrauterine infection, identified fetal malformation. The center annually accepts an average of 5400 births, with a decrease over the past 3 years to 5000 births, which is due to the organization of inter-district perinatal centers.

Pathological births have increased to 63%, which is due to the admission of pregnant women with severe somatic diseases: cardiovascular pathology, diabetes mellitus, kidney pathology, central nervous system, sepsis, oncology, as well as obstetric pathology: with miscarriage, with an extremely burdened obstetric-gynecological history, isthmic-cervical insufficiency, antiphospholipid syndrome, after in vitro fertilization, preeclampsia, rhesus conflict, antepartum hemorrhage, with central placenta previa with or without placenta accreta, pregnant women with 2-3 or more scars on the uterus after a cesarean section, with prenatal rupture of membranes, etc.

In recent years (2016-2023), the RPC has introduced modern innovative methods of diagnosing and managing pregnant women:

- ✓ confidential investigation of maternal mortality cases [8,9],
- ✓ audit of critical situations [10,11],
- ✓ ultrasound screening of the fetus to identify fetal malformations subject to surgical correction in the RPC [12],
- ✓ use of color Doppler mapping (CDM) to identify abnormalities of the uterine cervix, failure of the uterine scar [13],
- ✓ ultrasound compression elastography with qualitative assessment of the condition of the uterine scar after cesarean section and metroplasty in organ-preserving surgeries [14],
- ✓ controlled balloon tamponade of the uterus [15],
- ✓ organ-preserving technologies in placenta accreta [16,17],
- ✓ preventive ligation of uterine vessels in the risk group for bleeding during cesarean section [18],
- ✓ analysis of cesarean section using the Robson scale [19],
- ✓ use of carbetocin for atonic bleeding [20],
- ✓ cerclage and pessary for isthmic-cervical insufficiency [21],
- ✓ management of pregnant women with AFS,
- ✓ management of pregnant women with early and late preeclampsia [9],
- ✓ for the first time in the republic, intrauterine diagnostics of hemolytic disease of the fetus was introduced in rh-negative pregnant women by cordocentesis and intrauterine intravascular blood transfusion to the fetus [22],
- ✓ use of endoscopic technologies (hysteroscopy and laparoscopy) in complicated postpartum periods [23],
- ✓ organ-preserving operations in case of uterine suture failure after cesarean section and postpartum peritonitis [24],
- ✓ dispensary observation of women who underwent organ-preserving operations for obstetric bleeding and purulent-septic diseases after cesarean section was carried out [25,26].

Due to the concentration of seriously ill patients, over the past 10 years the frequency of abdominal delivery has increased from 24.0% (2014) to 42.6% (2024) (Fig. 1).

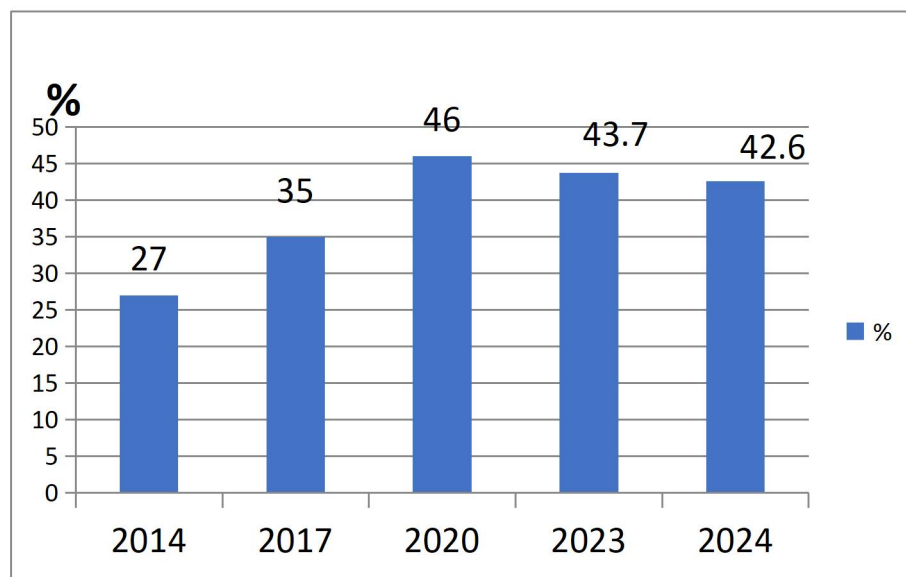


Fig. 1. Frequency of cesarean sections in the Republican Perinatal Center (2013-2024)

A new and important link in the care of newborns in the RPC is highly specialized neonatological care in the neonatal intensive care unit, in the department for the care of premature and sick newborns. Particularly noteworthy are the achievements of the neonatal surgery department of the RPC, where on average about 650 patients are treated annually. Surgeries are performed for esophageal atresia, high and low intestinal obstruction, anorectal anomalies, gastroschisis, omphalocele, diaphragmatic hernia, necrotic enterocolitis, etc.

In recent years, an innovation has been the implementation of about 40% of neonatal surgeries using laparoscopic methods.

As a result of improving the quality of obstetric and neonatal care over the past 7 years, the survival rate of extremely low birth weight newborns has increased by 17.7%: from 27.0% (2017) to 44.7% (2024) and very low birth weight newborns - by 7.7% over the same period (Fig. 2).

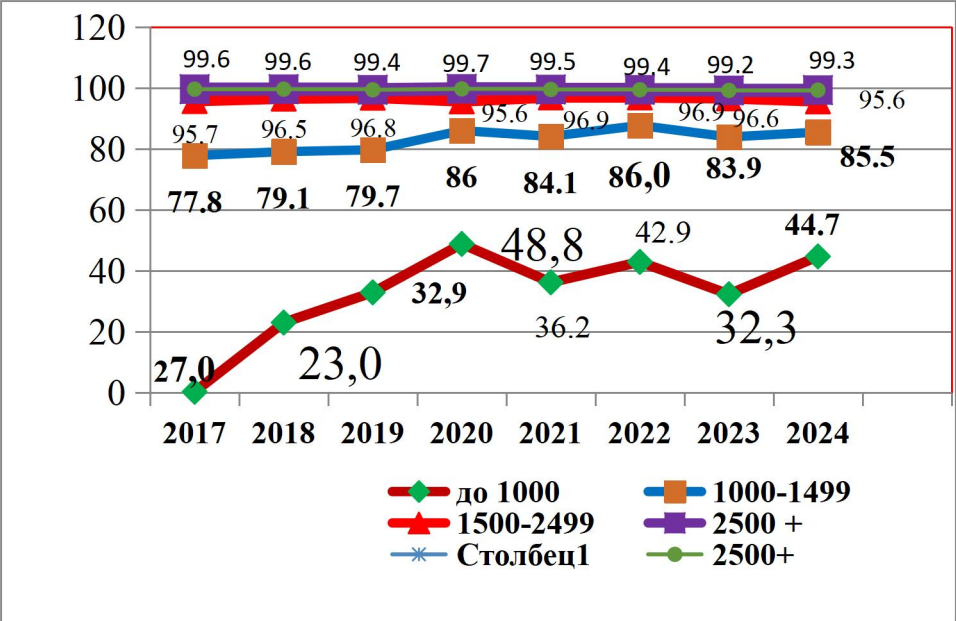


Fig. 2. Survival of newborns by weight categories in the Republican Perinatal Center (2017-2024)

Perinatal mortality in 2024 decreased and amounted to 16.2 ‰, which is 13.9 ‰ less than in 2015 .

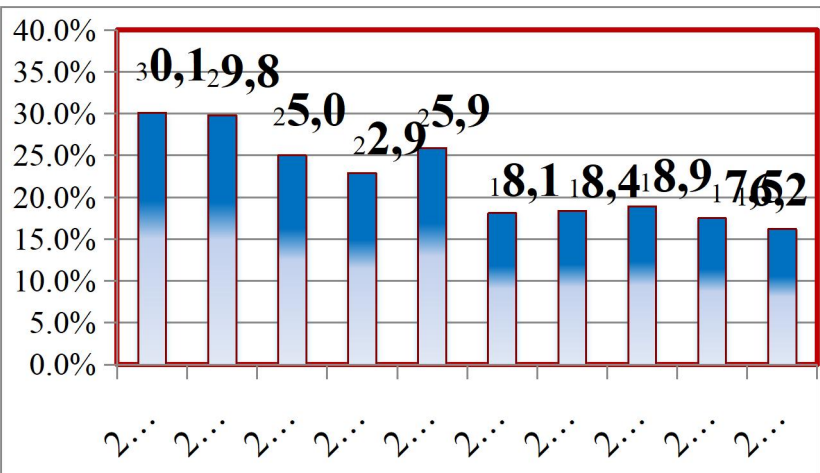


Fig.3.Dynamics of perinatal mortality in the Republican Perinatal Center, % (2015-2024)

In the structure of perinatal mortality, 63.3% are premature babies. Among the causes of early neonatal mortality, the first place is occupied by congenital malformations (45.0%), the second place is occupied by respiratory distress syndrome (26.8%) and the third place is occupied by infections (19.7%).

CONCLUSIONS.

The introduction of new technologies for diagnostics, prevention, and treatment of obstetric complications in the perinatal center helps to promptly identify pathologies in pregnant women, improve antenatal care for high-risk pregnant women and women in labor, and has reduced perinatal mortality in newborns. In the future, a differentiated approach to the implementation of innovative technologies in regional and inter-district perinatal centers will have important practical significance.

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