

Perinatal Care Regionalization: Improving Organization of Maternal and Infant Health Services

Ukraine Maternal and Infant Health Project (MIHP-II)



FINAL REPORT

August 1, 2011—September 14, 2012



USAID
FROM THE AMERICAN PEOPLE



ЗДОРОВ'Я МАТЕРІ І ДИТИНИ



MOTHER & INFANT HEALTH

MIHP Partners:



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About the Maternal and Infant Health Project-II in Ukraine

The Maternal and Infant Health Project II (MIHP) has, over the last nine years, been a leader and innovator in improving perinatal care in Ukraine. Since 2002, MIHP has worked in Ukraine to improve the health of women and their infants by implementing evidence-based perinatal technologies, including family planning (FP) and other key reproductive health (RH) interventions in line with international recommendations. By June 2011, more than 55% of the births in Ukraine had benefited from evidence-based perinatal technologies. The results of MIHP's work in Ukraine for the period of 2003-2011 are described in detail in the end of project reports.

MIHP's achievements from 2003-2011 include:

- ◆ National pre-service curricula for obstetrics and neonatology were revised and subsequently endorsed by the Ministry of Health (MOH) and Ministry of Education (MOE) for nationwide dissemination;
- ◆ Fifty-one evidence-based clinical protocols (obstetrics, neonatology, pediatrics, and infection control) were developed in collaboration with the MOH;
- ◆ More than 10,500 health care providers and 700 expert trainers were trained on all topics related to perinatal care;
- ◆ Evidence-based protocols and national orders were implemented in 520 facilities (181 maternities, 205 women's clinics, 134 pediatric polyclinics);
- ◆ Sixty-two maternities were certified as "quality of care" facilities.

The above achievements translated into improving the following neonatal and maternal health outcomes:

- ◆ Neonatal mortality was reduced in MIHP sites (from 6.7 per 1,000 live births in 2007 to 3.3 per 1,000 live births in 2010);
- ◆ The maternal mortality rate (MMR) was reduced in MIHP-supported facilities. In 2010, MIHP had MMR of 17.0 per 100,000 live births, as compared to 29.4 per 100,000 live births in non-MIHP-supported facilities and 23.1 per 100,000 live births in Ukraine as a whole.

The most recent phase of MIHP II, August 2011 – September 2012, built upon past successes and capacity, yet also took the program in new directions. Most significantly, MIHP responded to and supported the Presidential Initiative — National Project "New Life – New Quality of Maternal and Infant Care".

In September 2010, the President of Ukraine initiated the National Project to improve perinatal practices and accelerate progress towards Millennium Development Goals (MDGs) 4 and 5. In response to the Government of Ukraine's written request to USAID and the U.S. Ambassador, USAID allocated additional resources to MIHP-II and extended the project from August 1, 2011 to September 14, 2012, with the specific objective of providing technical assistance and support to the National Project.

The National Project aimed to improve maternal and newborn outcomes through creating third-level centers in each Ukrainian region; improving access to services and referral systems (from lower to higher levels of care); increasing the quality of care by identifying perinatal risks in a timely manner, expanding compliance, continuity and comprehensiveness of care.

The technical assistance that MIHP provided to the National Project included developing national laws and regulations related to the regionalization of perinatal care and providing technical support to partner regions (Autonomous Republic of Crimea and Kharkiv oblast) for developing comprehensive regional strategies related to the regionalization of perinatal care. MIHP-II also provided technical assistance to Lugansk oblast through funds provided by TNK-BP. The project also continued its close collaboration with international agencies (UNDP, UNICEF, UNFPA, WHO, Swiss Cooperation) in coordinating and fostering technical assistance related to regionalization of perinatal care.

MIHP's highlights for the most recent phase, August 2011- September 2012 include:

- ◆ National guidelines on regionalizing perinatal care containing definition and the scope of different levels of care; criteria for referral, maternal and neonatal transportation, including guidelines for transportation in-utero; distance counselling; continuous quality improvement strategies; and indicators for monitoring and evaluation of a perinatal care system performance were developed and subsequently endorsed by the MOH;
- ◆ Three National Orders (Prikazes), regulating regional perinatal centers were developed and endorsed by the MOH;
- ◆ Region-specific regionalization concepts and regional orders regulating regionalized perinatal care systems were developed and endorsed by AR Crimea MOH and Kharkiv oblast health authorities;
- ◆ Communication strategies and dissemination plans of the principles and benefits of perinatal care regionalization were developed for oblast-level civil and health authorities in partner regions of AR Crimea and Kharkiv oblast;
- ◆ Over 1000 health care providers were trained on various perinatal care topics.

“... After 10 years of fruitful cooperation with MIHP, much has been done in Ukraine to improve accessibility and quality of care delivered to Ukrainian mothers and infants. MIHP supported the development and dissemination of evidence-based clinical protocols, standards of care provided to mothers and infants, and perinatal technologies. Doctors and nurses had an opportunity to learn from international experts on the implementation of evidence-based effective perinatal technologies. I am deeply grateful to MIHP for their extensive work on implementing effective perinatal care, their generous talent of knowledge sharing and valuable practical experience that already yields good results...”

Dr. Raissa Bogatyriova, Vice Prime Minister, Ministry of Health of Ukraine

Source: Letter of Dr. Raissa Bogatyriova to MIHP-II, July 12, 2012

I. Building an evidence-base for policy development, perinatal health planning, and system strengthening

Study tours

MIHP organized and supported Ukrainian representatives to participate in a workshop, held in St. Petersburg, Russia, that focused on developing guidelines for the regionalization of perinatal care. The workshop provided an excellent opportunity for Ukrainian health policymakers to learn about the Russian experience of perinatal care regionalization. This workshop was the starting point for joint efforts (among the National Project, MOH, and MIHP) to develop a national legislative base related to the reorganization of the perinatal care system.

Another learning opportunity for Ukrainian health policymakers, hospital managers, and health care providers was a study tour to Irkutsk oblast in Russia. Participants had the opportunity to learn about and observe the practical implementation of regionalization policy in Irkutsk. The Russian colleagues shared their challenges and lessons learned regarding regionalization. The visit helped MIHP-II convince Ukrainian health managers about the importance of regionalizing perinatal care and establishing a holistic perinatal care system for improving maternal and neonatal health outcomes.

The study tours were transformational, allowing Ukrainian professionals to get hands-on experience in regionalization, especially from a country like Russia, which also inherited a Soviet health care system.

“We witnessed the positive experience and high effectiveness of implementing a regionalized perinatal care system in Irkutsk oblast. The unique experience we gained will help us apply regionalization principles in AR Crimea.”

Tatiana Babych, First Deputy Minister of Health, AR Crimea

Needs Assessment

In 2011, MIHP-II supported thirteen Ukrainian experts to be trained in assessing the quality of perinatal care in facilities, using a special tool developed by WHO. A WHO expert trained the Ukrainians in the practical application of the WHO assessment tool and their newly-acquired skills were used to assess the quality of perinatal care in maternity facilities throughout Ukraine.

An evaluation of the effectiveness of perinatal care system at the regional level was needed in order to move forward with the policy of regionalization. To carry out the evaluation, MIHP-II developed an instrument and tools to assess the different levels of care in and the performance of the regional perinatal care system.

The assessments were conducted in the Autonomous Republic of Crimea and Kharkiv oblast. The assessments covered service organization, infrastructure, the details of medical equipment, perinatal services, perinatal care transport, the definition of levels of perinatal care, and linkages between regional perinatal centers and maternity services at the rayon (secondary level health care facilities) and primary

health care levels. The assessments identified the strengths and weaknesses of perinatal care in the regions and helped to inform recommendations for how to reorganize maternal and infant care.

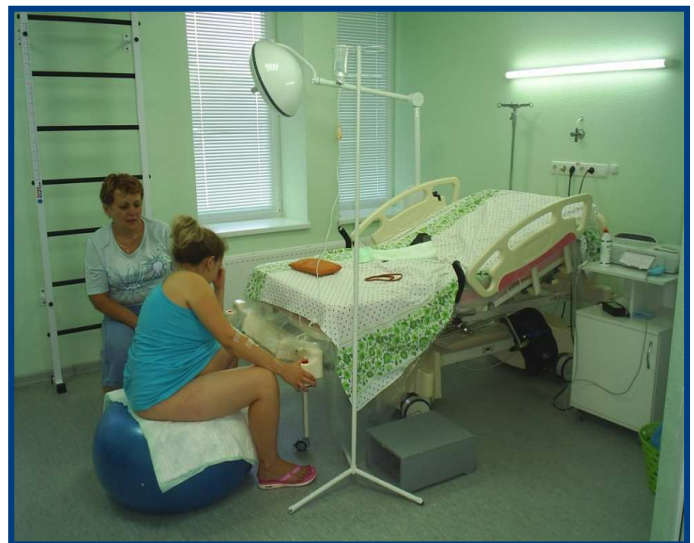
The assessment's results and recommendations helped Kharkiv oblast develop a functional third-level oblast perinatal center and a regionalized perinatal care system. MIHP-II helped the oblast prepare individual medical assignments for perinatal centers, which were completely based on the oblast's infrastructure and existing resources. MIHP-II was instrumental in introducing the multidisciplinary management of complicated cases in Kharkiv oblast's perinatal center. Similar activities were conducted in the Autonomous Republic of Crimea, where a perinatal center is scheduled to open in the autumn of 2012.

USAID/MIHP-II expertise saves budget money in Kharkiv oblast

In collaboration with the Ministry of Health and the National Project, MIHP-II experts carried out a joint assessment of the organization of the perinatal health care system in Kharkiv oblast. The assessment also aimed at selecting one of the oblast maternities to become a modern third level perinatal facility. The Kharkiv Oblast Health Administration had originally decided to transform Maternity Hospital #5 into a regional perinatal center, which would be extremely expensive.

However, after the perinatal system assessment, the administration instead decided to transform the Oblast Hospital, which is a multifunctional institution with an extended diagnostic department and bigger premises. The reconstruction of Oblast Hospital, which is now a modern, third level regional perinatal center, cost much less than what would have been spent on Maternity Hospital #5.

“The expert analysis helped us make not only an evidence-based decision, but also brought a huge relief to the oblast budget. We’ll do our best to be the first in Ukraine to demonstrate a model perinatal care center in Kharkiv oblast,” said Alexander Galatsan, Head of Oblast Health Administration.





Photos from Kharkiv Regional Perinatal Center, 2012

"We organize continuous perinatal consiliums. Twice a week we invite multidisciplinary teams consisting of gynecologists, anesthesiologists, and pediatricians working in our center to discuss patients' cases. Such meetings and discussions help us more effectively manage the most complicated cases. As a result, 76% of pregnant women belonging to high and very high risk groups delivered healthy babies despite their increased risk," said Irina Kondratova, director of Kharkiv Regional Perinatal Center.

Source: <http://kharkivoda.gov.ua/>

In Lugansk oblast, MIHP-II worked with project partners, using funds donated by TNK BP. MIHP-II experts worked with Lugansk oblast health authorities to develop a set of recommendations for developing a plan for the perinatal center's improved infrastructure.

comprehensive list of indicators to monitor the performance of an entire perinatal care system. This includes indicators for first, second, and third level perinatal facilities, and indicators for evaluating the effectiveness of the perinatal referral system.

"Now we have a system for evaluating the performance of the overall perinatal care system. I am sure that this system will allow the management of the National Project "New Life— New Quality of Maternal and Infant Care" and Ukraine's Ministry of Health to regularly assess the effectiveness of the perinatal care system's reorganization and take effective measures to improve it and eliminate barriers."

Elena Osinkina, Coordinator of the National Project “New Life – New Quality of Maternal and Infant Care” and Presidential Administration Advisor

Cooperation at the regional level

Every oblast is very specific according to its particular geography, population dynamic, infrastructure, and resources. Thus the development of region specific plans and systems was necessary for regionalizing perinatal care. National policy documents formed the basis for developing regional programs and strategies on regionalization.

Each pilot region established a technical advisory group (TAG) to develop individual, region-specific regionalization concepts. MIHP-II provided technical support to the TAGs. The technical assistance resulted in endorsed regional orders that regulate the long-term strategy of regionalized perinatal care systems in both partner regions, AR Crimea and Kharkiv oblast.

Advocacy plan and dissemination of the principles and benefits of perinatal care regionalization

The regionalization of perinatal care involved a number of sensitive actions such as the closure of small maternities and the development of transportation systems. MIHP-II realized that local communities need to be actively involved in all steps of planning and creating a regionalized perinatal care system. Public opinion can play a key role in facilitating the changes needed for reorganizing perinatal care. It is very important to use every possible informational channel in disseminating knowledge and awareness about the benefits of a regionalized perinatal care system. Change becomes possible only when the community gains a clear understanding of all the advantages of reorganizing perinatal care and believes that change is needed to improve care for women and newborns.

MIHP-II supported oblast-level civil and health authorities in partner regions to develop a strategy for advocacy and knowledge dissemination on the principles and benefits of perinatal care regionalization. Both partner regions developed and endorsed their communication strategies and plans. These strategies, at the request of MOH, were then submitted to the MOH and posted on the MOH website as guides for other oblasts.

In addition to developing communication plans, MIHP-II conducted trainings for mass media in each pilot region. The training course aimed at developing the capacity of journalists to provide effective and professional coverage of perinatal care reform and the benefits of perinatal care regionalization for mothers and babies. In addition, MIHP-II conducted trainings for representatives of territorial administrations on how to present the benefits of regionalized perinatal care system to communities. During these trainings, civil authority representatives and local journalists acquired knowledge about the

necessity for perinatal care reform, the benefits of regionalized perinatal care, and the importance of the effective handling of sensitive activities, such as the closure of small maternities. The trainings were attended by 100 participants, including 25 journalists and 25 regional managers from each partner region. The trainings also involved administrators at the highest levels, representatives of the Presidential Administration, and representatives of the National Project.

Before training for representatives of rayon and municipal administrations on the benefits of regionalizing perinatal care, which was conducted by MIHP-II, Aleksey Lysenko, Deputy Head of Blyzniuki Rayon State Administration in Kharkiv Oblast and a training participant said, “You really opened my eyes. Now I understand that a small rayon maternity, without adequate personnel and infrastructure, is dangerous for mothers and babies. I also realized that such a small maternity is too much of a financial burden for the rayon budget.”

Kharkiv, 3/08/2012

II. Health Workforce Capacity Building and Continuous Quality Assurance

MIHP-II supported trainings to reach a critical mass of health care providers in partner regions. The project organized a series of training courses on effective perinatal care (EPC) topics for the staff of third level perinatal centers, including OB/GYNS, neonatologists, midwives, nurses, and epidemiologists. During eight years of work, the project developed a significant number of training materials on several EPC topics (e.g. effective perinatal care, effective antenatal care, infection control, breastfeeding, newborn resuscitation, PMTCT, kangaroo mother care), which were used during various training courses. These trainings helped perinatal care professionals integrate evidence-based national clinical protocols and recommendations into routine practices.

One of the main functions of perinatal centers is to provide critical care for seriously ill and preterm infants. Most require care in neonatal intensive care units (NICUs). Therefore, the need for developing evidence-based training materials on intensive care and training NICU staff in recent advances of neonatal critical care became evident. MIHP-II, with the assistance of local and international experts, developed training materials on advanced neonatal care. The training materials include theoretical and practical sessions on the most common critical problems observed in NICUs as well as how to counsel mothers whose infants are in the NICU. During an advanced neonatal care training course, 49 health care providers mastered their skills and acquired evidence-based knowledge in managing critical conditions in NICUs. Eight trainers were trained to roll-out the training course to other health professionals.

It is critically important to harmonize evidence-based neonatal care in newborn intensive care units with the humanization of care for preterm babies in NICUs. MIHP-II worked with perinatal center staff to introduce the principles of baby friendly and family-centered care in NICUs, including the empowerment of families to participate in the care of their babies while in NICUs and to make informed decisions regarding their treatment and care.

One such principle, kangaroo mother care (KMC) was introduced in the partner regions. KMC is an effective way of managing a premature baby. It reduces neonatal infections, hypothermia, and the risk of post-discharge neonatal mortality. With the KMC approach, preterm babies gain weight better and develop faster than babies receiving conventional care. In the previous phase of the project, MIHP-II started developing training materials on KMC, which were finalized and field tested during this current phase. Forty-nine health care providers, neonatologists, and pediatric nurses were trained in perinatal centers and pediatric hospitals, using the newly developed KMC materials. Additionally, MIHP-II trained 26 healthcare providers in Lugansk oblast with TNK-BP funds. The trainings were conducted by Ukrainian experts who had been trained in Bogota, Columbia, where the Kangaroo mother care method originated.

MIHP-II conducted trainings on infection control for 60 health care providers in the partner regions as well as a similar training in Lugansk oblast for 39 health professionals, which was funded by TNK-BP. The training was designed to clarify and explain the provisions of National Order #234, on preventing nosocomial infections in maternity hospitals. During the training, health care providers learned the rationale behind every element of infection control. The participants also learned how to find the best solutions for some of the most contentious issues surrounding infection control. Special focus was given to appropriate hand washing techniques, the use of gloves, antiseptic, and personal protective equipment, and isolating patients with infections that have different mechanisms of transmission.

Emergency Obstetric Care was another highly popular training course developed by MIHP-II. Since perinatal centers serve a large proportion of women with high-risk pregnancies, the centers need highly skilled staff who are competent in managing obstetric complications. MIHP-II trained 300 health care providers in emergency obstetrics. The course covered managing obstetric haemorrhages, managing hypertensive disorders in pregnancy, managing non-obstetric pathologies, and intensive care for obstetric haemorrhages.

The new national *prikaz* (order) on antenatal care was endorsed in 2011. This evidence-based order brings considerable changes to antenatal care provision in Ukraine. As a result, the government revised the existing antenatal care training materials. MIHP-II, in collaboration with the Ukrainian-Swiss Maternal and Infant Health, developed a curriculum for pre-service and post-graduate education in antenatal care. The highlight of the course is evidence-based, family-oriented antenatal care technologies, which are listed in the new National Order and greatly increase the focus on patients' needs. The curriculum was endorsed by the Ministry of Health and the National Academy of Post-Graduate Education and will be used for clinical trainings and in pre-service and post-graduate medical education.

Clinical trainings on effective antenatal care were conducted for 49 obstetrician-gynaecologists and midwives working in antenatal clinics in the pilot oblasts. In addition, 21 health care providers were trained in Lugansk oblast. Additional training activities conducted by MIHP-II for medical staff of perinatal centers of AR Crimea, Kharkiv oblast, and Lugansk oblast (funded by TNK-BP) include:

- ♦ **Evidence-Based Medicine (EBM).** This training explains how to assess available evidence to make optimal clinical decisions. Trainings in evidence-based medicine help convince health care staff to implement effective perinatal technologies. MIHP-II conducted EBM trainings for 39 health care providers in Kharkiv oblast.
- ♦ **Effective Perinatal Care (EPC).** This training was conducted by a team of five expert trainers for 44 health care providers. During the training, participants mastered and practiced evidence-based obstetric and neonatal clinical methodologies.
- ♦ **Tutorial training course on effective perinatal care** for health care providers of perinatal centers in both partner regions. The major focus of the training was on issues identified by the analysis of monitoring data and during follow-up visits. The training used theoretical and practical “on-the-job” approaches for practicing evidence-based obstetric and neonatal clinical methodologies. In total, 100 health care providers (50 participants from the partner regions and 50 from Lugansk oblast) benefited from the tutorial trainings.
- ♦ **Evidence-based practices in the second stage of labor.** During these trainings, 48 participants learned about the positive outcomes of non-supine delivery positions, the mechanical side effects of labouring positions on the back, and informed choice for women to choosing any comfortable position for labor and delivery. The training participants refined their theoretical and practical skills in free-delivery position techniques. During practical sessions, the trainees visited delivery rooms, assessed the availability of equipment for free delivery positions, and provided recommendations to perinatal center management.
- ♦ **Clinical protocols of National Order #624, normal delivery, partograph, and active management of the third stage of labor (AMTSL).** MIHP-II's previous experience showed that the development and endorsement of a new clinical protocol should be accompanied by a relevant training course for health care providers. Such trainings help health care providers better understand clinical protocols, change their clinical behaviour, and ensure sustainable implementation of the new protocols. With funds from TNK-BP, MIHP-II trained 78 medical staff in Lugansk oblast on the clinical protocols endorsed by National Order # 624.

- ♦ **Optimal Infant Feeding Practices in the Health Care Settings.** Forty-four participants improved their knowledge and competence in optimal infant feeding by learning the importance of breastfeeding, delivery room practices that influence successful initiation and continuation of breastfeeding, solutions to common breastfeeding problems of mothers and babies (especially during the early weeks), milk expression, feeding of sick and premature babies, and the use of alternative feeding methods.
- ♦ **Postpartum Contraception.** Through interactive presentations, small group activities, role playing, and brainstorming sessions, a group of 39 doctors and midwives from partner region perinatal centers improved their knowledge and counseling skills in postpartum family planning methods, including: lactation amenorrhea method (LAM), hormonal contraception, intrauterine contraception, barrier methods of contraception, and surgical sterilization.



Photos from MIHP-II trainings in Kharkiv Regional Perinatal Center

“Just a decade ago the issues of partner-accompanied deliveries, letting women choose their desired method of pain relief and delivery position, and involving relatives in newborn care were beyond discussion. The Mother and Infant Health Project has helped health professionals dramatically change their approaches to perinatal care and see new opportunities for improving the quality of care for mothers and infants.”

Dr. Viacheslav Kaminskyi, Chief Obstetrician-Gynecologist of Ukraine

The sustainable implementation of effective perinatal care is impossible without continuous training and re-training of the health care staff. This can be achieved through building internal capacity as well as a system for conducting trainings at the oblast or facility level. MIHP-II conducted a series of training of trainers (TOT) trainings for the staff of regional perinatal centers to build local training capacity.

Number of trained trainers (by oblast)

Topic	AR Crimea	Kharkiv Oblast
Effective perinatal care & evidence-based medicine	7	13
Infection prevention and control	9	10
Antenatal Care	9	7

The process of continuous quality improvement cannot be completed without supportive supervision, which helps institutionalize changes at the oblast or facility level. MIHP-II conducted a workshop on organizing follow-up visits to perinatal care facilities for obstetrician-gynecologists, neonatologists, and midwives from the obstetric departments of Simferopol, Kharkiv, and Lugansk. The participants mastered their skills in post-training assessment of quality of perinatal care, providing supportive supervision, and producing reports on supervisory visits (which included providing feedback and recommendations for improvement and presenting the recommendations to health care managers).

Eight experts were trained in AR Crimea, seven in Kharkiv oblast, and eight in Lugansk oblast. After the training, the participants made supportive supervision visits at clinical sites in the partner regions. The supervisory visits helped the newly trained experts analyze the strengths and weaknesses of EPC implementation, identify solutions to problems, and develop recommendations. Based on the experts' recommendations, the facilities developed six-month strategic improvement plans.

III. Monitoring and Evaluation

During the previous phase of the project, from 2006 to 2011, MIHP developed a system for monitoring and reporting, which was adopted and used by all 20 cooperating regions. The indicators and the data collection system improved quality and encouraged continuous quality improvement. To further assist implementation, a software package was developed to facilitate the monthly accumulation of statistics from each maternity and provide for further analysis for decision-making. This software was installed in the centers of statistics in each oblast, and the staff responsible for gathering and entering data received hands-on training and guidance.

Monitoring data collection and analysis is vital for continuous quality improvement, timely identification of issues, and the development of plans for improvement. The regional health authorities have recognized the advantages of the new monitoring system. In 2011 and 2012, the project's partner regions continued collecting data and maintained an electronic database. Monitoring and evaluation was continued in 85 maternities in AR Crimea, Kharkiv, and Lugansk oblasts.

CONCLUSIONS

The Mother and Infant Health Project has accomplished a great deal over the previous nine years. Sustainable changes in maternal and infant health outcomes have been documented and have made a real difference in the lives of many Ukrainian mothers, infants, and their families. There are many reasons for the project's success, including the dedication, competence, and persistence of and MIHP-II staff.

Other factors influencing the success of MIHP-II include:

- ◆ The programmatic and budgetary support provided by USAID and managed by JSI, which enabled the program to grow and expand both geographically and technically.
- ◆ The use of evidence-based programming in maternal and infant care, combined with the readiness of the Ukrainian medical community to adopt the evidence-based practices.
- ◆ A consistent emphasis on partnership and collaboration with the Ministry of Health, oblast health authorities, maternity hospitals, medical universities and other public institutions, the private sector, other USAID-supported programs, and international agencies (e.g. WHO, UNICEF).
- ◆ The creation of local effective perinatal care champions, senior medical professionals, university professors, teachers, and private sector leaders, who helped institutionalize evidence-based, effective perinatal care technologies.

Much has been accomplished in this current phase of MIHP-II. The national policy documents and guidelines on perinatal care regionalization, the policies and plans for perinatal center staffing, the organization of the referral system, and distance counselling all will serve as a foundation for the regionalization of perinatal care nationwide. These successes will help the Ministry of Health and the National Project implement the Presidential Initiative in as sustainable a manner as possible. Regional perinatal centers in Kharkiv and AR Crimea will serve as models for developing third level perinatal care facilities across the country.

Of course, much remains to be done. The perinatal health care system in Ukraine is at a crucial stage of evolution and growth. The continued implementation of unified standards of care, regionalization, an effective system of trainings for healthcare providers at all levels, and a new system of monitoring and evaluating the performance of the perinatal care system will be required to achieve rapid positive change and a significant improvement in the quality of perinatal care in Ukraine.

