



**“Arabkir” Joint Medical Center –  
Institute of Child and Adolescent Health**

**World Vision Armenian Office  
CHILD HEALTH NOW CAMPAIGN**

**DEBRIEF FROM THE REPORT  
ON THE SITUATION ANALYSIS ON MATERNAL, NEWBORN AND CHILD  
HEALTH SERVICES AND HUMAN RESOURCES IN ARMENIA**

Yerevan - 2011

## SUMMARY/ DEBRIEF

This report has been prepared by Arabkir Joint Medical Center-Institute of Child and Adolescent Health with the support of the officials from Maternal and Child Health (MCH) Department of the Ministry of Health (MOH). The report is based on the study conducted within the framework of World Vision Armenia's (WVA) Child Health Now Campaign.

**The purpose of the study** was to conduct a situation analysis on maternal and child health services in Armenia, assessing availability and accessibility of the services, as well as the health workforce.

**The objectives of the study** were 1) to review the available policy papers and documents, 2) to map the MCH services and their distribution across Armenia, 3) to uncover existing needs and major gaps and 4) to review current global trends and best practices for MCH service models.

**The study methodology** included literature review, review of available secondary data and policy documents, aggregation and analysis of the data available on a marz (district) and national levels; focus group discussions with parents and medical personnel, and comparative analysis of the MCH care models and indicators in different countries. Along with the review of available official information, findings of many reports, surveys and evaluations conducted by international governmental and non-governmental organizations working in Armenia has been taken into account for developing the final report.

Questionnaire data on health services and workforce on marz primary and secondary/tertiary levels have also been used in the report. The questionnaires were developed together with the MCH department of the MOH Armenia. Data on utilization and referrals to the marz and central medical institutions was analyzed and presented in the report; facts and figures on health workforce, utilization of health services and statistics on population were provided by the Center for Disease Control at the National Institute of Health and National Statistical Center of the Republic of Armenia.

Focus group discussions with the parents and medical personnel were organized with the support of WVA's Area Developments Programs (ADPs) in six marzes of Armenia.

### Results/Key Findings

#### *Obstetric-gynecological (OB-GYN) services*

Provision of reproductive health care services in Armenia is organized through the network of OB-GYN medical institutions, based on three level system – ambulatory, health posts and women's consultations, secondary and tertiary level maternity hospitals.

During recent years the hospital beds in OB-GYN services has declined by 31.5%. The big portion of the burden of OB-GYN hospital services has fallen upon the tertiary level hospitals., Based on WHO core „Health For All” 2009 statistical database, the number of the OB-GYN hospital beds in Armenia Currently correspond to the requirements of the European average standard, and is in line with the same average of many CIS countries.

Currently, the number of OB-GYN, working in the republic is 936 (2009 data), meanwhile in 1990 this number was 784. There is high availability of medical human resources in urban areas, meanwhile medical

human resources are scarce in the marzes and rural areas. A number of marz maternity hospitals do not have OB-GYN surgeons, (particularly districts of Ashtarak, Aparan, Ararat, Kapan). Some marz level maternity hospitals do not have anesthesiologists-resuscitators. The number of neonatologists has been declining. According to MOH data from 2009, 100 out of total of 164 neonatologists are working in Yerevan city. One of the key facts recorded by the Association of Neonatologists in Armenia, UNICEF and MoH is that 73% of maternity health care facilities fail providing day-and-night child care by neonatologists. During last decade only a few OB-GYN graduates were referred by the Government to work in the marz hospitals.

Even though the number of premature births does not exceed 8%, still in the marzes cases of under-registration of low-birth weight newborns (less than 1000 gr) are observed.

Perinatal mortality is the prevailing type of child mortality. Still-births make up the biggest portion of perinatal mortality cases. There are significant discrepancies between urban and rural areas. Perinatal mortality figures in Yerevan are more than twice higher than in rural areas (27.2% versus 11.5%), most probably due to the fact that the major high risk group women deliver in Yerevan maternity hospitals. Even though there is a positive trend in decreasing child mortality rate during recent years, the perinatal mortality still remain high.

Since approving the strategy on "Early detection, prevention and treatment of cervical cancer", in 2007 the number of revealed cases of cervical cancer has increased by 15-20%, however, the coverage of Pap-testing is very low (does not exceed 15% throughout the country). In many marzes Pap-testing is not available at all because of unavailability of citologists.

Since mid 2008 the Obstetric Care State Certificate Program has been introduced and implemented, which ensured Government subsidized free of charge health services for pregnant women for the period of delivery and postpartum care. One of the positive results of the Program has been increased hospital deliveries (up to 99%). Also as a result, the prenatal care has improved; particularly early enrollment of pregnant women into antenatal care services has increased by 10%. This program and a number of other factors have ultimately affected the birth rate in the country. In 2009 the number of births has increased by 7.5%. Another good trend has been observed in relation to maternal mortality rate. Only 3 cases of maternal mortality were registered in 2010 compared to 13 in 2009 (although this indicator needs to be calculated using statistical data for three-year period).

Many maternity clinics have been upgraded during recent years. The OB-GYN and neonatological departments of clinics in Hrazdan, Ijevan, Armavir, Goris and Noyemberyan were fully renovated and appropriately equipped with credit provided by the World Bank and contributions of the Social Investment Fund and All Armenia Fund. Most of the Maternity hospitals in Yerevan, and neonatal departments and intensive care units (ICUs) of the central marz hospitals were equipped with up-to-date technological means with the support of VIVA-CEL MTS mobile operator (private donor). New protocols and modules have been adopted and implemented for multi-level continuing medical education within the framework of WHO/UNICEF programs and USAID NOVA project trainings.

In 2008 an emergency obstetric care service was established, however, it is not well-functioning yet, its neonatal care services, such as sick newborns' referrals and transportation to the resuscitation departments of the centralised clinics in Yerevan have often failed to meet required standards

Only in 55-60% of cases in women of high risk group have undergone intrauterine sonographic investigation 3 times (recommended by protocols), also this indicator is quite low in rural areas, such as cities of Armavir, Aparan, Noyemberyan, Vardenis, Chambarak and Spitak. Tendencies in pathologies in pregnancy period during recent years are expressed by increased cardio-vascular diseases, urinal infections, diseases related to the central nervous system, as well as increased gestational pathologies and complications, which may cause maternal mortality or miscarriages and premature birth. Progress has been documented for the enrollment of pregnant women into HIV/AIDS testing.

#### *Pediatric services*

Pediatric care in Armenia is provided through a three level system – primary pediatric care is provided at ambulatories and polyclinics by family doctors and pediatricians, secondary/ tertiary care is provided at the hospitals. The pediatric hospital care is organized in 65 medical centers, 6 of which are located in the villages and are called maternal and child health care centers, 44 are marz hospitals and 15 are located in different big medical hospitals in Yerevan. Based on WHO database the number of hospital beds corresponds to the requirements of the average European standard.

Review of the utilization of the marz pediatric health care services revealed that around 20% of children from age 0 to 12 months are hospitalized, and treated in marz clinics. This demonstrates that the marz hospitals play an important role and are responsible for health of a significant number of child population. However, the review of statistical data has also uncovered the discrepancies in the outcomes of the marz and central (located in Yerevan) clinics. Those discrepancies are due to differences in the quality of health care services, capacity of medical human resources, clinics' sanitary and physical conditions and availability of equipment at clinics, as well the functionality of emergency transportation system for neonatal and other pediatric cases. As a result, every 4th child in Yerevan and 2nd child from marzes seeking hospital care dies within 24 hours after hospitalization. Also referrals from different marzes to the central health care hospitals vary from one marz (district) to another. This speaks for a inconsistencies in case management and applied approaches.

According to the MOH Armenia, in 1990s there were 2000 pediatricians and narrow pediatric specialists in Armenia. This number has been decreasing steadily, in 2000 there were only 1135, in 2005 - 928 and in 2010 - 694 pediatricians and narrow pediatric specialists. This substantial reduction in numbers was mainly caused by the decreasing numbers of pediatric specialists in the marzes. The reduction in Yerevan was 1.1 times, compared to 2.3 times in the marzes. Hospitals saw the biggest reduction of pediatric specialists (in Yerevan – 2.8 times, and in the marzes – 4.4 times).

Since the Independence of Armenia, the decline in the number of pediatric staff, including neonatologists was the sharpest compared to other medical specialties. The pediatric personnel is aging, which is particularly evident in the marzes. Currently very few new graduates specialize in pediatrics and very few are referred to the marzes. As a matter of fact, during last 5 years no pediatrician was referred to any marz after graduation. It is also important to note that one fifth of current pediatricians are in their 60s. Majority of the marz clinics and polyclinics do not have narrow pediatric specialists.

Availability of equipment in the marz hospitals and primary health care units has significantly improved during the recent years, however, there are notable discrepancies in the level of equipment availability in marz hospitals. Data collected within the framework of this study can help to develop a plan for further strengthening of the marz medical institutions.

Based on MOH data, there are pediatricians working in ambulatories and polyclinics is, 376 of whom work in Yerevan. This tier of health care faces similar problems of aging of pediatric staff and unavailability of new graduates willing to work in the marzes.

### *Focus Group Discussion Results*

Focus group discussions with parents and medical doctors have been conducted to uncover the needs and gaps in MCH services across Armenia. Both parents and doctors stated that during recent years there has been an increase in applications to the medical institutions, those applications became more timely, which is a sign of increased accessibility of the services. According to overall perceptions MCH services are generally trusted, especially after the introduction of the Obstetric Care Certificate Program.

During the focus group discussion parents' groups have brought up about certain issues, such as workload of medical doctors (both pediatricians and family doctors), especially those working in two or even more clinics/ambulatories. Doctors have complained about excessive clerical work, which cuts the time for counseling and interaction with patients. Distrust toward performance-based financing introduced in 2009-2010 and expected to function in starting from 2011 has also been mentioned.

The issues related to the introduction of family practitioners' institute and pediatricians' role in the primary health care were also discussed. Facts and cases stated about family doctors, previously working as a therapists, demonstrated that there is no willingness to provide pediatric care on the side of family therapists (especially to children under age 2), and vice versa, as former pediatrician family doctors try to avoid from provision of adult care (especially in cases of management of chronic diseases). Many parents mentioned that after leaving maternity hospital they preferred to take their newborn to „former“ pediatricians. The interviewed family doctors raised the issue of the quality and organization of the CME in family medicine and generally postdiploma education, where the theory on pediatric care is not supported by practice. The doctors also raised the issue of growing negative trends in relationships between the staff of the primary health care units and the hospital care, where deontological mistakes often taken place and no links and collaboration is maintained between those two levels.

### *Review of international experience*

The international experience in pediatric and OB-GYN care was reviewed for making corresponding references and suggestions later on. In some CIS countries the „soviet“ model of MCH services does not exist. The model of family medicine has also been introduced in Central Asian countries. In a number of CIS countries pediatricians still exist in a team. In Russia, Ukraine and Belarus the „old, soviet“ model is maintained. In many countries the pediatric education is still provided by the separate faculty of Pediatrics of Medical Universities, followed by two or three year of clinical residency in pediatrics. In the same countries the OB-GYN clinical residency is the same as in Armenia. It requires three or four years of clinical residency.

In many countries the shortage of pediatric staff is of a similar concern. Due to „Presidential Program“, during recent years many regional hospitals in Russia have been incorporated with the equipped and staffed new perinatology centers. The emergency transportation system was recovered, which was specifically critical for the remote regions.

The review of human resources in pediatric care in 29 European countries showed that in 7 countries the number of pediatricians in primary health exceeds the number of family doctors; in 12 countries – vice versa, and in the rest 10 countries – a mixed model exists. So, in fact, in the majority of European countries pediatricians are functioning in primary health care level. In the countries with „mixed” model, 90% of children under age 2 are monitored by the pediatricians.

The experience of USA in the same area was also reviewed. It is evident that in the United States there is a tendency toward increasing the number of pediatricians. The proportion of pediatricians under age 35 is 22% out of the total number. Two third of pediatricians function on outpatient level, and two third out of this number are working in a group practice, which reminds a „soviet” model polyclinics. The distribution of pediatricians is done the following way: 88.7% of them are placed in urban areas, and 11.3% are in the rural, which means that to some extent pediatricians are considered as a primary health care providers in the rural areas too. Another finding was that among all applications to the doctors for pediatric ambulatory care 57% were addressed to pediatricians, 20% to family doctors. Once again these facts state for increased role and involvement of pediatricians in provision of primary health care to children in the US.

#### *Recent Healthcare reforms in Armenia*

The situation analysis of MCH services and workforce in Armenia, revealed that recent policy changes in MCH area, particularly introduction of Obstetric care Certificate Program two years ago and increased financing (doubling the investment in child health care) with recent introduction of Child Health Certificate Program are justified. However, it is clear that in parallel to this other systemic issues need to be addressed. Those are fair distribution of human resource in the marzes, as the number of professionals working with children is critical for good health outcomes. Another important issue is to improve functionality and links between different levels of of child health care services, strengthen team work and collaboration.

Further cut of hospital beds in pediatric services, especially in the marzes may directly affect quality and accessibility of child health care services . Also, there are a number of issues related to pre-diploma and postdiploma pediatric educationnot corresponding to the international standards.

#### **Recommendations and suggested interventions**

The following recommendations and interventions are suggested

- Continue policy improvements and increase the MCH financing in with specific focus on accessibility and quality of care. Resources should be made available solving systemic issues, introducing new regulations, monitoring and supportive supervision of the system.
- Re-establish previously functioning institution of the marz chief OB-GYNs, strengthen the vertical functional links among MOH, republican and marz maternity institutions, and put local clinics under the supervision of the advanced Yerevan hospitals.
- Develop models and regulations for collaboration and organization of the activities of OB-GYNs and family doctors; establish the regulatory mechanism for integration of women’s consultations with maternity hospitals and their staff rotation.
- Provide recommendations on continuing medical education (CME) of obstetric nurses, midwives, family doctors and OB-GYNs; get approval on provision of CME on OB-GYN in the advanced clinics and centers (not only at the National Institute of Health), increasing the accessibility and quality of provided education.

- Develop a package for monitoring and assessing the quality, knowledge and skills of graduates (OB-GYN and obstetric nurses) of the state and non-state medical educational institutions.
- Continue strengthening the marz maternity hospitals, renovating those and equipping find appropriate financial and other incentives to refer new graduates and corresponding specialists to the marzes.
- Introduce a well-functioning quality assurance system in the marzhospitals .Re-established and strengthen the institutie of chief pediatricians in the marzes
- Increase the role of professional organizations and institutions, especially in the monitoring of the quality of provided care.
- Continue providing scholarships for clinical residency for pediatricians and other narrow pediatric specialties and parallel to that develop mechanisms for referring those graduates and other doctors to the marzes.
- Incentivize pediatricians, working in the marzes via budgetted and alternative sources of funding.
- Regulate and improve the role and involvement of pediatricians in primary health care
- Continue to review the international experience and look for twinning opportunities.