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CHILD AND ADOLESCENT HEALTH IN ARMENIA

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Abstract

The aims of this article are: to present the analysis on the health status of children and adolescents of Armenia, the trends and factors affecting since 1990s; to analyze experiences and effectiveness of interventions in the field of Child and Adolescent Health implemented during the last 15 post-independence years; to discuss conclusions and lessons learned.

The relevant statistics was analyzed, including official data of the Ministry of Health of the Republic of Armenia and the National Statistical Service. Data of relevant child health surveys held in Armenia were also considered. The results of analysis highlighted both positive and negative tendencies in the health status of Armenian children and adolescents. Since mid 1990s, the child and infant mortality rates declined substantially, mainly due to decrease of mortality caused by acute respiratory infections and diarrheal diseases. This tendency was proved not only by the official national statistics, but also by independent observations. However, the infant mortality rate is still rather high, especially compared with the Western and Central European countries; in the main this is a result of the high neonatal mortality. The studies also revealed high prevalence of childhood disability and developmental disorders, which are estimated as high as 12% in children at the age below 8. The surveys also identified behavioral problems in school-aged children and adolescents such as unhealthy habits, mental health disorders, lack of knowledge/awareness on HIV/AIDS prevention and reproductive health, etc. Results indicate that most policies and programs adopted in the field of Child and Adolescent Health in Armenia demonstrated effectiveness thereof and led to positive changes. However, existing problems stress the need for developing and implementing new strategies.

Key words: child, adolescent, health, mortality, morbidity

Introduction

Children are the future of the world; their health and well-being are the basis of the well-being and prosperity of the nations. A good health status starting from prenatal period to adolescence is the most important guarantee for the society's future, its economic and social development. Attributing importance to this fact, the international community emphasized several times the priority of child protection issues, which are enshrined in a number of documents adopted by the United Nations (UN) Organization and different UN agencies: Children's Rights Declaration, "A Favorable World for Children", "Millennium Development Declaration", European Strategy for Child Health and Development, etc. The child health status, particularly the Infant Mortality Rate (IMR), is recognized as one of basic indicators of welfare and development of any nation.

After declaring independence, the Republic of Armenia as a member state to the United Nations joined the Convention on the Rights of

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the Child and other relevant International Conventions and Declarations. The Constitution of Armenia and some other legislative acts stress the value of children for Armenian society.

Armenia established its independency in 1991 and immediately faced a number of challenges such as consequences of Spitak earthquake (1988), which killed more than 25,000 people and led to ruins almost one third of the country; the regional conflict and the communications blockade; the economic collapse caused by the disruption of the trade with former Soviet republics and rapid start of transition from the socialist-style "planning" economy to the market-oriented one. It resulted in dramatic worsening of welfare of the Armenian people, their living conditions; lack of food, electricity, heat, etc. All mentioned factors contributed to worsening the health status of the population of Armenia, including children; conditions for functioning of the health institutions, including the pediatric care facilities, were also worsened by these factors.

Armenia inherited from the Soviet era relatively developed, but non-effective health care system. Particularly, the pediatric care system included network of the rural ambulatories and pediatric policlinics (out-patient facilities), which provided primary health care services for children; pediatric departments in the district hospitals of all districts of Armenia. Some pediatric hospitals in the capital city of Yerevan and two other largest cities were appointed to provide both secondary and tertiary level care. The pediatric health system established during the latest Soviet period made substantial input in improving the health status of children in Armenia, including gradual reducing the mortality rates, providing immunization services, etc. However, as other parts of the health system, the pediatric health system functioned non-effectively with heavy emphasis on costly hospital care. Particularly, the pediatric practices were complicated by unnecessary hospitalizations: existed regulations guided doctors working at primary level of the health system to refer to the hospitals any child with mild and moderate course of disease. The need to change this situation was recognized in late 1980s only [USSR Ministry of Health: Order No. 723 of 1985]. The treatment duration at the hospitals was as long as some weeks and this practice resulted in high probability of developing intra-hospital infections. As other sectors, the pediatric staff of Armenia was relatively isolated from the international pediatric community and the latest achievements of the science had not been implemented in Armenia until independence time.

These practices were no longer acceptable in independent Armenia; the pediatric system (as well as the health system on the whole) met challenges and need for adaptation to new conditions. This became more clearly also due to trends in the health status of Armenian children observed in early 1990s. Particularly, there was some increase of IMR in early 1990s, mainly as a result of increasing mortality rates due to acute respiratory infections (ARI), including pneumonia, and acute diarrhea diseases (ADD). Due to lack of social mobilization and lack of supplies, the immunization coverage also decreased. There have been observed dramatic trends in the children's breastfeeding practices. After independence, Armenia was supplied by large amounts of milk formulas, which were irrationally distributed free of charge to those families, who had neonates and infants; it led to dramatic decreasing the rate of breast-fed children [Government of Armenia and UNICEF, A situational analysis of children and women in Armenia, 1994].

Since 1993, to overcome mentioned difficulties, the Ministry of Health of the Republic of Armenia launched and implemented the series of interventions targeted to improving the health status of Armenian children and adolescents. Here belong: the Expanded Program of Immunization (adopted in 1993); the Programs for Control of Acute Diarrheal Diseases and Acute Respiratory Infections (adopted in 1993 and 1994, respectively); the Program on Promotion of Breastfeeding (1994); the Project on Iodization of Salt (1994); the Program on Child Growth

and Development (1996); the strategy of Integrated Management of Childhood Illnesses (1998); the Baby-Friendly Hospital Initiative (1999); Providing Effective Perinatal Care (2002); the project on Prevention of Mother-to-Child Transmission of Human Immunodeficiency Virus (2002); the Youth-Friendly Health Services Initiative (2005); the Concept of Early Intervention in Child Development (2005). The priority of mother and child welfare is reflected in the Governmental Decrees "National Program on Child Protection Actions" and "Mother and Child Health Strategy 2003-2015" adopted in 2003, as well as other documents.

For implementation of these programs, the Ministry of Health established close collaboration with the World Health Organization, the United Nations Children's Fund and other international organizations. Collaboration with them let not only to mobilize vital resources, to provide supplies, but also to introduce the internationally recognized approaches, guidelines in Armenia and, raising the knowledge, teach the health care providers to use them.

In addition, many significant changes occurred within the pediatric health service since 1990s. Particularly, the Child Health system was seriously changed by introducing in Armenia the institute of Family Medicine. It resulted in shifting the policies; the hundreds of pediatricians were re-trained as family doctors. As a part of the optimization policy in Armenia, all pediatric policlinics were re-organized and currently all of them function as departments within the joint health centres. One of important steps was re-organization of the former Republican Pediatric Hospital and establishing the Institute of Child and Adolescent Health of Armenia (2003); the Ministry of Health liaisoned the Institute to participate in developing and introducing the initiatives in the field of Child and Adolescent Health.

Over last decade, many changes occurred at the international level as well. Particularly, the World Health Organization developed the regional strategy on Child and Adolescent Health and Development [*WHO, 2005*]. It includes eight priority areas such as Maternal and Newborn health; nutrition; communicable diseases; injuries and violence; physical environment; adolescent health; psychosocial development and mental health; chronic diseases and disability. Taking into consideration the positive experiences, Armenia was selected as a pilot country for introducing and experiencing the regional strategy [*WHO, 2005*].

Main findings

The Armenian legislation defines childhood as a period of life since birth until 18 years. WHO considers three basic periods of childhood: early age (until the 5th year); school age (5-10) and adolescence (11-19). There are common problems across all ages; however many issues within the childhood are strictly age-specific. Therefore, the basic statistical data, existing problems, and suggested strategies will be discussed within two age-groups: a) early age and b) school-age and adolescents.

Early Childhood

Immediately after declaring independency, the infant mortality rate slightly increased. As discussed, it could be explained by the dramatic developments in the country. However, due to initiatives taken, this tendency was stopped and currently Armenia is one of the few CIS countries where child mortality did not increase substantially during the overall crisis period [*UNICEF, 2007*]. Moreover, due to the implementation of the rational policies it continued to drop and according to the official statistics (Figure 1),

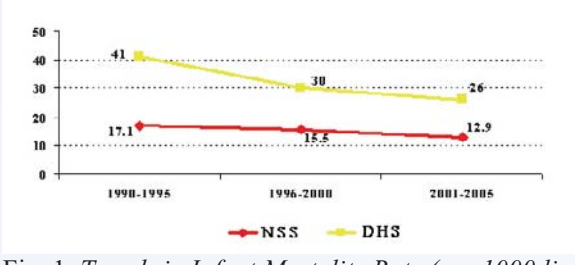

Fig. 1 *Trends in Infant Mortality Rate (per 1000 live births) in 1990-2005 according to the National Statistical Service and Demographic Health Survey*

decreased by some 34% during 1990-2005. In addition to data of official national statistics, the alternative survey data and international expert estimations also prove the decrease in child mortality in the same period. Thus, according to the household Demographic and Health Survey (DHS) conducted in Armenia in 2005 by the National Statistical Service (NSS) in collaboration with Macro International and Minstry of Health of the Republic of Armenia, the child mortality rate reduced by 37% in 1990-2004: the average indicator comprising 41% in 1990-1995 and 26% in 2000-2005 [*NSS, 2006*]. The picture slightly alters when the UNICEF assesses the situation using the computed indicator, which takes into account a number of other indicators of the countries - those for the social, educational, and economic development, as well as data of alternative child mortality surveys and the estimations of the international organisations and experts. However, analysis of the trends of Child Mortality indicators proves that Armenia succeeded to reduce child mortality indicators by 44% over the recent 15 years being second only to Estonia in decline rates [*UNICEF, 2007*].

It is internationally recognized that estimates of Child Mortality Rate can vary depending on the source of data, i.e. whether they are based on administrative or survey data [*UNICEF, 2007*]. The same refers to Armenia; Figure 1 shows the gap between the "official'' mortality rate and data gathered through household DHS. This gap is typical for post-soviet countries, particularly for those, located in the Caucasus and Central Asia. It is caused by two main reasons: the use of the Soviet definition of still/live births rather than the internationally accepted WHO definition and the under-registration and misreporting of infant deaths. Therefore, the gap, which is obvious in Figure 1 is typical not only for Armenia. Moreover, this gap in Armenia is the least among all Caucasian and Central Asian countries. Recently Armenia introduced the international standards of deaths registration and initiated practical steps on its implementation [*Saribekyan K, 2007*].

However, the following analysis shows that decrease of mortality was caused mainly by decreasng deaths caused by ARI and ADD and ARI, while other causes such as perinatal diseases and congenital malformations demonstrated a tendency to rise (Figure 2).

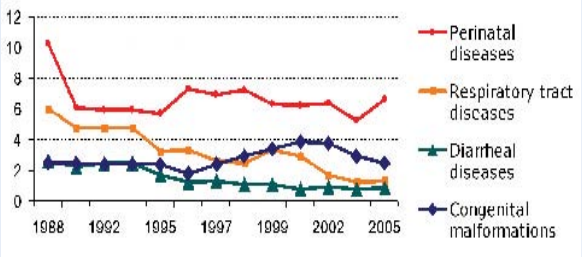

Fig. 2 *Causes of Infant Moratlity in 1988 - 2005*

Data of Figure 2 clearly reflect positive results of the programs on Control of ARI and ADD, adopted by the Ministry of Health in mid 1990s. Since 2001, the programs were implemented jointly as a Program of Integrated Management of Childhood Illnessess. Before starting both interventions, the situational analysis was done, which showed that one of the main reasons of high mortality caused by pneumonia and diarrhea was the irrational management of these diseases, especially at the primary level of healthcare. The surveys also showed wrong attitudes and practices on management of ARI/ADD among caretakers. Therefore, both programs were targeted to improving the management at primary level by developing the rational guidelines, introducing them through teaching the pediatric staff. The relevant health facilities were provided with the necessary equipment and pharmaceuticals. Also a series of awareness-raising campaigns to raise knowledge and improve practices at family and community levels were launched. Not only the moratlity trends [Hakopyan M, 2004], but also the results of surveys held in many regions of Armenia demonstrated the progress on management of ARI/ADD [Sargsyan S, 2005]. Data of studies, which assessed the overall quality of case management, are presented as Figure 3.

Besides improving the clinical management, the implementation of evidence-based approach and decrease of usage of unnecessary pharmaceuti-

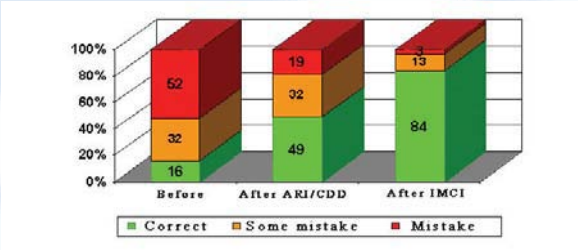

Fig. 3. *Quality of ARI and ADD management at the first level: before and after implementation of ARI/ ADD Programs and after initiation of IMCI Program*

cals led to substantial decline management costs at out-patient level. The average cost of home management of one case of ARI (or ADD) in a young child decreased from 840 to 340 Armenian Drams (AMD) in prices of 2001, indicating to a remarkable cost-effectiveness of the rational management of cases of most common childhood diseases.

The immuniztaion coverage in Armenia in early 1990s decreased sharply due to wrong attitudes to child immunization spread among families by a number of non-evidence based publications in Soviet and, later on, in Armenian mass-media. Besides, since independence the supply of vaccines became problematic due to disruption of traditional relations. All these factors led to an increase of morbidity caused by vaccine-preventable diseases (Figure 5).

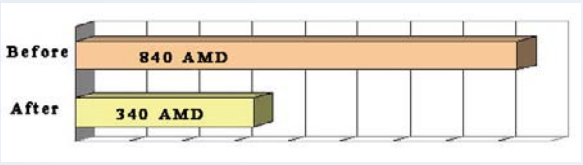

Fig. 4. *Average cost of prescribed medicine per case before and after implementation of Programs on ARI/ ADD/IMCI (in Armenian Drams)*

However, implementation of the Expanded Program of Immunization, organization of regular supplies by modern vaccines, improving the "cold chain" led to significant decrease of morbidity. Only rare cases of diphtheria were reported during recent years, and since 2002 Armenia was certified by WHO as a "Polio Free Zone". Since 2000, Armenia targeted its efforts to eradication of measles.

However, some studies, particularly DHS held in 2005 revealed that immunization coverage in Armenian chidlren is still unstaisfactory; the situation worsened since 2000. For instance, less than half of children at age of one year had requested 3 vaccinations against diphtheria, pertussis and tetanus; only 54.4% of children at the age of 18 months were given full range of basic vaccines [NSS, 2006]. Not only DHS, but also other sourses estimated that percent of children immunized against diphtheria, pertussis and tet-

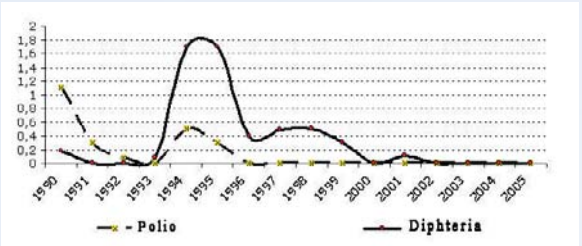

Fig. 5 *Morbidity by diphtheria and poliomyelitis in children in Armenia (per 100 000 children)*

anus by the age of 2 years is the lowest in region [*UNICEF, 2007*]. All these facts show that additional efforts are required to improve the situation with chidren's vaccinations.

The breastfeeding rate in Armenia decreased in late 1980s and early 1990s mainly due to large distribution of free milk formulas. Therefore, one of the main tasks of the peditaric health care system became promotion of breastfeeding and introduction of the initiative of Baby-friendly hospitals. The initiative started with establishing the practice of joint "mother-baby" staying in the maternities and early attachement. Last decade the large campaigns on promotion of exclusive breastfeeding were launched. Hundreds of health workers were trained due to the support of UNICEF. The country adopted the marketing code, which regulates the advertisiment of milk formulas. Finally, taken measures led to positive results and currently the breastfeeding index substantally has increased (Figure 6) compared to early 1990s [*Saribekyan K., 2007*]

Nutritional status of Armenian chidren is unsatisfactory. According to DHS data, 13% of children under 5 are stunted (which is a sign of

chronic undernutrition); overall 4% of all children are underweight .The situation with anemia also causes concerns: 37% of all childen under 5 have anemia; among them 19% have moderate anemia and one percent have severe anemia. Similarly, the proportion of women with anemia is as high as 25%.

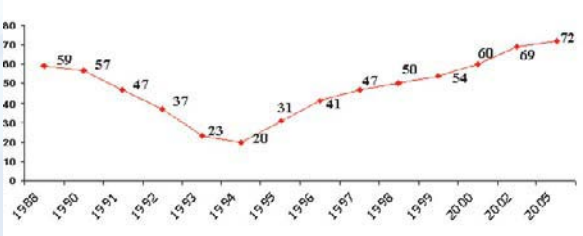

Fig. 6 *Breastfeeding index in Armenian infants (% of children received breastmilk until age of 4 months)*

Nowadays, one of the weakest points of the Child Health in Armenia is the neonatal care. As it is shown in Figure 2, the mortality caused by perinatal diseases is still high and perinatal diseases make the largest input in overall child mortality. It is also caused by the relatively large proportion of pre-term deliveries as well as proportion of the children with low-birth weight among all neonates. This fact obviously shows the unsatisfactory health status of the Armenian pregnant women and urgent need to improve the perinatal care.

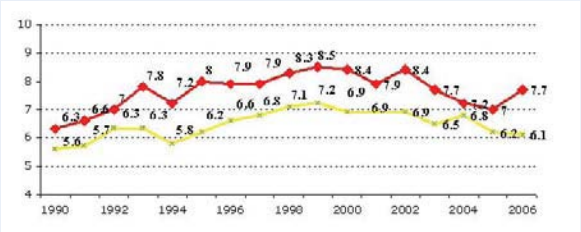

Fig. 7. *Prevalence of low birth weight and pre-term neonates (% to all births)*

Other initiatves implemented over the last decade made contributions into improvement of the health status of children in Armenia. Particularly, a number of activities were launched to struggle iodine deficiency, which is considered as one of main reasons of child's growth retardation. The most effective and efficient practice of iodization of salt was adopted and regulated by the law. As a result, currently Armenia is in the process of international recognition for the fact of overcoming iodine-deficiency.

The program Well Child Growth was launched by the Ministry of Health and led to optimization of the management of growth of the children, early identification of retardation of child's physical and mental development. The mandatory screening of all children within this Program started in 1997; the screening inventory by Ireton was used. With the support of partners the trainings were held and most of relevant health care providers have been trained. Currently, the new registration forms are officially approved and are in use country-wide.

From 1988 to November 2007, 506 cases of HIV were diagnosed in citizens of Armenia, including 11 children. Among these children 10 were infected by the Mother-To-Child transmission. For prevention of HIV infection spread among children, the program on Prevention Mother-To-Child transmission was launched [*National AIDS Centre, 2007*].

Child disability, which in most cases starts in early childhood, is one of the priorities of modern societies. According to assessments of various surveys, different level developmental disorders are observed among up to 10% of children. The prevalence of developmental disturbances and related problems, including disability caused by these, among children under 8 was studied in Armenia with UNICEF support in 2004. In the sample population disability caused by disturbances of the functions for different reasons (mainly perinatal) comprised about 12% (4,768 children under 8 were assessed). Thus, developmental disturbances and restricted functions caused by these have a rather large share in the structure of overall disability [*UNICEF, 2007*].

The survey also revealed that services for children with developmental disturbances are still insufficient. Thus, the public unawareness

on the services for children with developmental disturbances is rather high (58%). Difficulty of access in terms of distance, mainly due to lack of relevant services in the communities, is a hindrance to complete servicing (about 40%). Prohibitive prices on healthcare and unawareness of parents result in indifference among a considerable part of both parents and health workers to problems of children with disabilities. Hence, 85% of children with mental impairments, 76% of children with speech impairments, 53.5% of children with visual impairments, and 42% of children with hearing impairments have never received any care (intervention). On the whole, 77% of children with development disturbances need medical, rehabilitation or psychological multi-professional care. In 2005 the Ministry of Health of the Republic of Armenia in collaboration with the Arabkir Joint Medical Centre – Institute of Child and Adolescent Health developed the Concept of Early Intervention, which is targeted to improving the quality of care and introducing relevant services.

School Age and Adolescence

Young people are often perceived as the healthiest age group yet the recent surveys revealed a generation, whose health is seriously at risk: an increasing level of STIs and unwanted pregnancies, alcohol, drugs and tobacco abuse, a threatening spread of HIV/AIDS and disturbed mental health [WHO, 2005]. The significance of the health problems in school-age children, adolescents and youth were not recognized until recent. The adolescent health services, which existed at Soviet time, were mainly targeted to preparation of young men for service in the Army and ignored basic principles of dignity or privacy.

As a country in transition, Armenia faces typical economic, political and social problems. Trying to cope, individuals and families had to change their behaviours and their whole lifestyle. A number of threats occurred due to this, especially for the health of adolescents. The "new" ways contradicted the national traditions. The current lifestyle and behavioural manifestations of Armenian adolescents are the consequence of a number of factors. Since adolescence is also an age of experiments and behaviour risk, the early formed habits and lifestyle and the influence of the environment have a great impact to their further development and health.

Studies on reproductive health of young people revealed low awareness and lack of knowledge of the general public, families and the adolescents themselves on reproductive health and the restricted capacity of the health system to provide adequate care. According to DHS data about 14% of all interviewed young women aged 15-24 reported having had at least one induced abortion. As a result, 4 abortions and 29.3 deliveries are annually recorded as per 1000 young women in Armenia [*NSS, 2003*].

The Second Generation Epidemiological HIV Surveillance revealed some behavioral patterns among group of population aged 15-24. Among observed only 28.2% had proper knowledge about HIV prevention. About 40% respondents mentioned that they had sexual intercourse and are sexually active; 4.2% - reported history of sexually transmitted infections (STIs) during the last year. Only 60% of those having more than one sexual partner used condom consistently. Young people's awareness of HIV/AIDS and STIs varies. Even among young people who are aware, most reports indicate that high-risk behaviors are still prevalent [*National AIDS Centre, UNICEF, 2005*].

Smoking is quite common among adolescents of Armenia. The research conducted in Armenia in 2004 by the National Institute of Health (NIH) within the framework of Global Tobacco Youth Survey showed that 5.6% of interviewed schoolchildren at age of 15-16 are current and regular smokers and almost one quarter (24.8%) - ever tried to smoke. Smoking is more common among boys. The experience of smoking was reported by 42% of young males and by 11% of females [*NIH, 2005*].

Besides smoking, many other environmental factors like the in-door and out-door air pollution,

lack of general safety measures, violence, and traumas damage considerably the health of children and adolescents. The lack of healthy lifestyle skills like physical exercise is yet another factor affecting the health of the entire population of Armenia, regardless of age or social status.

In the capital city of Yerevan the survey of Awareness on Mental Health issues was held among students of the high schools, their teachers and parents . The questions were asked about children's mental health and behaviors. According to the survey results, there are many risk factors, which have an impact on adolescent's mental health and well-being, including poverty, early parental loss, child abuse and family conflict, problems related to parental migration; chronic health problems in family members as well as parental substance abuse. About 15% students reported 'being unhappy' every week. About half of them reported 'less than good' health and 'low feeling' every week. About 80 % of respondents reported 'nervous feeling'. Among respondents 52% of girls and 28 % of boys reported difficulties in getting to sleep [*Yeghyan M et al, 2005*].

The Health Behavioural in School–aged Children (HBSC) Survey held by the Institute of Child and Adolescent Health of Armenia with the support of UNICEF based on WHO methodology (2005) provided most significant data regarding such aspects of adolescent health as general health status, care seeking behavioural, nutrition, mental health, reproductive and sexual health, knowledge on HIV/AIDS, etc. The sample included 1205 children of 60 schools from 10 regions of Armenia selected by the two-stage cluster analysis. The questionnaire included 122 questions about all aspects of the health behaviour among young people [Babloyan A. et al, 2005].

Surveyed adolescents considered themselves to be generally healthy, however when health problems did arise, they reported that they often did not inform parents, teachers or health workers. An indicator of a problem of increasing concern is that one third of those surveyed are dissatisfied with their weight, reporting that they weigh too much, and citing unhealthy eating habits: 8 out of 10 adolescents surveyed do not eat breakfast and prefer fast-foods and sweets to healthier options, which is the highest indicator among all European countries (Figure 7).

Generally, the young people surveyed lack regimented physical activities and they spend an excessive amount of time watching television (Figure 9). More than half of the interviewees don't know how to use a computer, though in Yerevan many young people reported spending a significant amount of time playing computer games. While hygienic habits were lacking among many of the young people surveyed, they are also faced with environmental concerns that are beyond their control: sanitary conditions in the schools are substandard. Some adolescents, mainly boys, start smoking at school age; however, most smokers start to use tobacco when they are adults. Some adolescents drink alcohol and use cannabis (2.4% of those who were surveyed), however Armenia maintains a below average age of first alcohol and cannabis use compared to other Eastern European countries. The survey indicated that different types of violence significantly affect Armenian adolescents, with

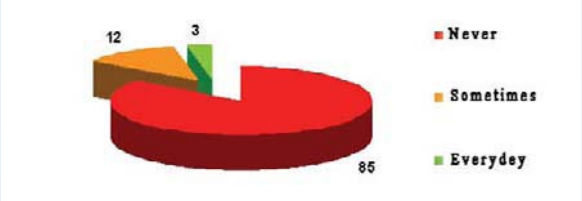

Fig. 8. *Eating habits among Armenian adolescents (percent of school-aged children who eat breakfast daily)*

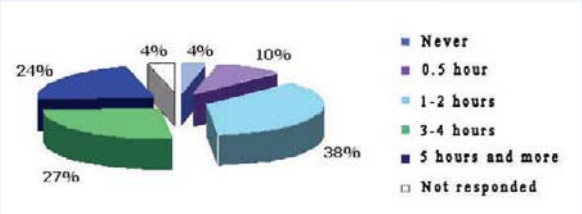

Fig. 9. *Sedentary Behaviors among Armenian Schoolchildren (percent of children watching TV daily)*

particularly pronounced impact on urban population. Many adolescents don't feel comfortable accessing health services.

The results of this study highlight many challenges, which Armenia faces in delivering effective coverage and high quality adolescent health care. The broad spectrum of issues and gaps covered by the survey stress an urgent need for implementation of new strategies and a focus on adolescent health in Armenia, and in some case, establish the foundation for further investigation. Based on data analysis and using the relevant international experiences, the Ministry of Health jointly with the Institute of Child and Adolescent Health and with the support of UNICEF developed and started implementing the National Concept of Youth Friendly Health Services (2005). The YFHSs are defined as ones responding positively to young people's needs for correct and up-to-date information and provide a full range of accessible and affordable services and quality care in the most appropriate way for young people. This includes an environment that guarantees privacy and confidentiality for the young person and services provided by professional staff.

The problem of raising incidence of non-communicable diseases (NCD) in children is among new issues of modern medicine. These diseases not only cause problems in childhood and adolesence but also contribute to health problems, which pursue the patient further on. A continuous growth in various childhood NCDs has been registered over the last decades world wide. On the whole, according to the estimations of the National Institute of Health of the United States, currently the prevalence of chronic diseases and conditions among school age children and adolescents constitutes about 30%.

General and chronic health problems are common among Armenian school age children too. The screening done in the rural area of one of the regions of Armenia among 1898 school-age children showed that 406 of them (21%) had chronic health problems, such as retarded physical development, eye problems, chronic tonsillitis, gastrointestinal diseases, problems with nutritional status, allergy/asthma, hypertension, mental problems, etc [*Children of Armenia Foundation, 2005*].

The structure of chronic diseases has some peculiarities in Armenia. Particularly one of the most common diseases is Familial Mediterranean fever (FMF), which has ethnic origin [*Astvatsatryan V. et al, 2000*]. The prevalence of FMF is estimated at around 0.5-1%, having grown among Armenian children. Currently, there are more than 1500 children with FMF geting regular follow-up care at the Arabkir Joint Medical Centre - Institute of Child and Adolescent Health. Totally about 6500 chidren with different chronic diseases such as asthma, epilepsy, rheumatoid arthritis, inflammatory bowel diseases and others are currently under regular follow-up care in relevant centres of the Institute. Ministry of Health registered more than 500 chidren with diabetes. As many other figures, this one also demonstrates continouos tendency to rise. Therefore, the chronic diseases in children become one of key priorities for the child health care system of Armenia.

Conclusions

Presented data show the controversial picture of the Child and Adolescent Health in Armenia. There have been registered very important achievements such as reverting tendencies on increasing child mortality as a result of dramatic events of early and mid 1990s; moreover, the child mortality rate caused by ARI and ADD decreased; increasing immunization coverage is obvious, as well as increasing rate of breastfed children in Armenia. Some key policies were developed during this period including some new strategies in the field of Adolescent Health. The important steps in the field of prevention of child disability were taken. The Government constantly increases the input and demonstrates clear evidences for ownership over the field of Child and Adolescent Health. Generally, most of the adopted policies demonstrated effectiveness.

However, the field still meets a number of problems. The neonatal and perinatal mortality is still very high. The immunization coverage is unsatisfactory, therefore outbreaks of vaccine-prevented infectious diseases are possible. One of key problems is unsafe environment. The prevalence of childhood disability and developmental disorders among children is high. The chronic non-communicable diseases appear to be growing problem in the future. The behaviors of the children and adolescents are growing concern as well. The cross-sectional problems are low public awareness on health issues of adolescents and children as well as lack of knowledge and practices in families. Still there are gaps in the legislation.

Some conceptual lessons learnt over last years should be considered, while developing the future interventions. The scope of problems is very large: Armenia encounters challenges that are typical for both "developing" and "developed" world. New problems (for instance, as was shown by the HBSC survey, Mental Health among Adolescents, Violence,) are coming up or become more evident while many "old issues" (neonatal care, immunization coverage) are still on the agenda. The Armenian society undergoes rapid social and cultural changes: the situation is very dynamic and new values and habits enter into life very quickly. These changes lead to reappraisal of the overall quality of life and quality of health services; particularly, to higher expectations of caretakers from the health sector. New threats, new expectations, new situation set new tasks on the health system's agenda, while capacities of the health sector of Armenia are not adequate in many cases. It becomes clear that interventions in the Public Health sector should not follow the problems only, but must be targeted to prediction and prevention of newly developing problems. New threats for children and adolescents have very complex character and there is a need for more integration between many sectors, including health, education and social services. The life-cycle approach should be implemented practically: healthy infant → healthy child → healthy adolescent → healthy mother and father → new and healthy generation.

Overall, the analysis of situation indicates a strong need for developing and implementing the renewed National Strategy on Child and Adolescent Health in Armenia.