Strengthening Health Services for School-age Children and Adolescents in Armenia

Options and Opportunities

Bruce Dick, Marina Melkumova and Sergey Sargsyan

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Acronyms and abbreviations

AFHS	Adolescent-friendly health services
ASRH	Adolescent sexual and reproductive health
CRC	Convention on the Rights of the Child
ESPAD	European School Survey Project on Alcohol and other Drugs
EVYP	Especially vulnerable young people
FGD	Focus group discussions
GFATM	Global Fund for AIDS, TB and Malaria
GYTS	Global Youth Tobacco Survey
HBSC	Health Behaviour in School-age Children survey
HMIS	Health Management Information System
HTC	HIV testing and counselling
ICAH	Institute of Child and Adolescent Health
JICA	Japanese International Cooperation Agency
JMC	Joint Medical Centre
MARA	Most-at-risk adolescent (in relation to HIV)
MARP	Most-at-risk population (in relation to HIV)
MOES	Ministry of Education and Science
MOH	Ministry of Health
NCD	Non-communicable disease
NGO	Non-governmental organization
OP	Orientation Programme on Adolescent Health for Health Workers
RHIYC	Reproductive Health for Youth in the South Caucuses
ROA	Republic of Armenia
SACA	School-age Children and Adolescents
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WFP	Word Food Programme
WHO	World Health Organization
WHO EURO	World Health Organization Regional Office for Europe
YFHS	Youth-friendly health services

Quotes:

"These school-age children and adolescents are the first post-Soviet generation, and we are facing the results now of not having acted earlier … if we don't act now what will the situation be in the future?"

"Armenia is a country in transition - if we don't see the problems today, we will certainly see them tomorrow".

Health Services for School-age Children and Adolescents in Armenia

Executive Summary

The health and development of school-age children and adolescents in Armenia is cause both for optimism and concern. Although for some high-risk behaviours adolescents in Armenia fare better than adolescents in many other countries in the region, some negative trends are apparent and the current global financial crisis is compounding the post-Independence challenges in the country, both the health problems and the capacity of key sectors to respond effectively.

The overall aim of this review is to identify options for improving the health services provided to school-age children and adolescents in Armenia, taking into consideration previous experiences and the reality of the country in terms of available resources and capacity. The recommendations are based on a review of relevant policy documents and reports; key informant interviews carried out with people working at different levels within the MOH and MOES, and with the staff of NGOs and UN agencies; focus group discussions with polyclinic staff and pupils in selected schools; and a meeting that involved a wide range of partners to review an initial draft of the report.

The report provides a review of the current provision of health services to school-age children and adolescents, achievements and challenges, and identifies the relative advantages and disadvantages of different options and approaches to strengthening the provision of health services to this age group. Three main areas for action are proposed:

1. Strengthen and reorient those interventions that are already part of the health system, are funded and are being implemented at scale.
2. Evaluate those interventions that have been piloted in order to assess their potential to be implemented to scale in terms of impact and sustainability.
3. Develop and pilot new health sector interventions that would support the effectiveness of those health services that are to be taken to scale.

Specific recommendations are then outlined for the core elements of a model for strengthening health services to school-age children and adolescents:

1. Streamline the screening of school-age children and adolescents
2. Respond to the health concerns of adolescents, their parents and teachers
3. Evaluate existing youth-friendly health services
4. Develop information materials and new interventions areas
5. Improve monitoring and collaboration
6. Develop a phased and costed 3-5 year plan

Despite the challenges ahead, Armenia has several things in its favour in terms of providing services to school-age children and adolescents, of which three are particularly important:

- It has activities in the health sector that are mandated and paid for, through which health workers have contact with school-age children and adolescents at regular intervals.
- It has high-level political support to focus on a group of the population who in many countries receive inadequate attention and resources.

- It has a core group of people who bring different professional perspectives, technical competence and passion to improving the health and development of school-age children and adolescents.

1. Background and Rationale

Armenia has gone through significant social and economic transition since independence in 1991. This has had an impact on all segments of the population, including school-age children and adolescents. The challenges (both the problems and the capacity to respond to them) have been further compounded by the effects of the more recent global financial crisis.

Fortunately there continue to be a number of protective factors that positively affect the health of school-age children and adolescents in Armenia, not least conservative cultural values and a strong family support system – the majority of adolescents live at home, with strong social constraints on early sex and other potentially high-risk behaviours.

However, at the same time there are a number of developments that should give cause for concern. These include the negative impact of the economic situation on key programmes that are central to the health and development of school-age children and adolescents, such as education and health services; the potential longer-term impact of the social transitions that are taking place, effects that have occurred in other countries in the region; increasing access to information technology, something that has potential for both positive and negative impacts; and an environment where tobacco and alcohol use are common, and trafficking in drugs and people are growing problems.

School-age children and adolescents require many inputs for their health and development (e.g. information, skills, access to health services, and safe and supportive environment in which to live and learn), and many different sectors and organizations need to be contributing. However, in order for a comprehensive and multi-sectoral approach to the health and development of school-age children and adolescents to be successful, it is important that the individual sectors have a clear understanding of their specific contributions; that the activities identified benefit from and contribute to wider sectoral priorities and developments; and that the priority actions take into consideration not only the available evidence base for effective interventions and good practice, but also the availability of resources and the potential for sustainability.

Since the mid 2000's a number of interventions have been supported in Armenia that contribute to the health and development of school-age children and adolescents. The present review was initiated in order to synthesize some of the lessons learnt from these efforts, with a particular focus on the provision of health services, and to contribute to defining a model for Armenia that would provide a package of interventions to improve and maintain the health and development of school-age children and adolescents, in terms of the problems (current situation and trends) and the available resources and infrastructure.

2. Objectives and Methodology

The overall aim of the review was to identify options for improving the health services provided to school-age children and adolescents in Armenia, taking into consideration previous experiences and the reality of the country in terms of available resources and capacity.

The specific aims were to:

- Identify options for strengthening the health services provided to school-age children and adolescents;
- Outline a model that would be effective and that could be taken to scale in a sustainable way;
- Propose actions that would be needed to support the implementation of the model.

The segment of the population defined as "school-age children and adolescents" (7-19 years)[1] includes a very heterogeneous group in terms of heath problems, phases of physical and psychosocial development, roles and relationships. Many different individual and environmental characteristics need to be taken into consideration when developing interventions for this segment of the population, including age, sex, urban-rural domicile, socio-economic status and a range of factors that may increase adolescents' vulnerability, for example the availability of parental support.

"Health services" incorporate a range of activities (health promotion, prevention, early diagnosis, treatment and care, rehabilitation) and the strategies for implementing these activities will vary for different groups and in different settings[2]. In terms of content, health services for school-age children and adolescents need to include the provision of information, screening, counselling, treatment, care and referral for a wide range of health problems of importance to this segment of the population.

Although the main focus of the review is on the provision of health services, this needs to be seen within the overall context of the health sector's core contributions to the health and wellbeing of school-age children and adolescents (e.g. strategic information, collaborating with and contributing to the activities of other sectors, developing and implementing supportive policies and governance, in addition to service provision)[3].

[1] In general, during the review there was greater focus on the adolescent age group than on school-age children.

[2] While most attention was paid to health services provided by the Ministry of Health, NGOs also make an important contribution to the provision of services for this group of the population, particularly for vulnerable school-age children and adolescents.

[3] The review focused mainly on the primary care level of service provision, but it is important to note that the secondary and tertiary levels also need to be strengthened, otherwise there is likely to be a lack of leadership, limited resources for training and capacity development, and an absence of services for referral.

Inputs for the review included:

- An assessment of available policies, strategies, reports and other selected documents relevant to the health and development of school-age children and adolescents in Armenia, focusing on both the problems and also the responses.
- Key-informant interviews with staff from the Ministry of Health (MOH) Maternal and Child Health (MCH) Unit, the Ministry of Education and Science (MOES), the Head of the Standing Committee on Health Care, Motherhood and Childhood of the Republic of Armenia (ROA) Parliament, directors of selected schools and polyclinics, school nurses, UN agencies (UNAIDS, UNFPA, UNICEF, WFP, WHO) and national NGOs (see Annex 1 for key informants met).
- Focus group discussions (FGDs) with school-age children[4] and adolescents and with the staff of polyclinics, including school health nurses, responsible for providing health services to this age group (see Annex 2 for details of the questions that provided the basis for these FGDs).
- A feedback meeting and discussion with staff from the MOH, MOE, NGOs and UN agencies, based on an initial draft of this report.

In the time available for the review it was not possible to carry out a comprehensive assessment of all health services provided to adolescents. However, an attempt was made to review services in different parts of the country, and to include schools and health services where innovative interventions had and had not been carried out during the past five years (see map in Annex 2 for details).

[4] For reasons of consent and practicality, the focus group discussions only took place with school children over 12 years of age.

3. The Health of School-age Children and Adolescents in Armenia

This overview is based on the review of selected documents, the key informant interviews, focus group discussions, and the feedback meeting that was organized with representatives of government, NGOs and UN agencies.

3.1. The policy/strategy/health systems environment

There a number of relevant policies that provide a basis for health sector interventions in Armenia, including:

- Armenia is a signatory to the *Convention on the Rights of the Child* (CRC) and has made a number of legislative changes in line with this convention[5].
- A Youth Strategy (concept paper) approved in 1998 that deals with several factors of importance to the provision of services for adolescents, including the issue of consent and confidentiality[6].
- A National Child and Adolescent Health Strategy.
- A Youth-Friendly Health Services Concept paper.
- A focus on adolescents in national policies/strategies, for example the National Reproductive Health Strategy.
- Issues of relevance to adolescents, particularly in terms of risk-behaviours and future non-communicable diseases (NCDs), are included in the 2010 WHO EURO/World Bank Armenia Health System Performance Assessment[7].

However, it remains challenging to implement these policies through the multi-sectoral mechanisms that they require, and there is an absence of policies (or lack of implementation where such policies exist) in relation to alcohol, drugs and tobacco, and in terms of vulnerable and most-at-risk school-age children and adolescents. Several issues requiring policy-level action have been highlighted in previous country reports prepared for the Committee on the CRC.

From the key informant interviews and the FGDs with the polyclinic doctors, it is clear that there is significant political support at all levels of the health system to strengthen the national response to adolescent health[8]. However, many sectors in addition to health and education need to be involved in improving the health of adolescents, including: politicians, the Territorial Administration, local

[5] http://crin.org/resources/infoDetail.asp?ID=22301&flag=report#aa

[6] There is also a Youth Strategy 2008-2012 but this has not been officially endorsed/adopted by parliament

[7] http://www.euro.who.int/en/what-we-do/health-topics/Health-systems/stewardship-and-governance/publications2/2010/armenia-health-system-performance-assessment,-whoeurope-2010

[8] It was stressed by several key informants that despite the political support that exists there is an on-going need for advocacy to increase the attention and commitment of resources to adolescent health, and to appreciate that despite the compelling data and the availability of effective interventions, people who do not have a public health perspective are not easy to convince – as one person interviewed put it "a hospital for cardiac surgery is much easier to advocate for than smoking prevention interventions".

government, communities and families, social services (for abuse and mental health), and the private sector[9].

Despite the human resource and funding challenges, there is significant support from the parliament to strengthen the response to adolescent health because it is understood that (a) this is the time when new behaviours are developing (tobacco, alcohol, drugs, sex, affective disorders) which are difficult to change in adulthood, and (b) it is a peak period for receiving and disseminating information.

3.2. The heath situation of school-age children and adolescents: available data

A number of studies have been carried out that provide details about the health of adolescents and school-age children, including:

- The Health Behaviour in School-age Children survey (HBSC)[10] - the report from 2007 is available and the data from the 2010 survey are currently being analysed.
- The Global Youth Tobacco Survey (GYTS)[11].
- A Rapid Assessment and Response (RAR)[12] survey that was carried out on most-at-risk adolescents and especially vulnerable young people (drug users, sex workers, adolescents living in orphanages).
- The 2009 CRC report[13] included some focus on the health problems of adolescents.
- The European School Survey Project on Alcohol and other Drugs (ESPAD)[14] was carried out in 2007.
- A survey on Attention Deficit Hyperactivity Disorder (ADHD) was carried out in 2008 on 10-13 year olds (11.2%).
- Other unpublished surveys have also been carried out, for example the FGDs carried out by the FAR Children's Support Centre on vulnerable children and adolescents.

The availability of routinely collected statistics through the health management information system (HMIS) relating to school-age children and adolescents are limited[15], since much of the data are not systematically disaggregated by age, and there are on-going questions about the reliability of those data that are available. However, a number of reports have been published during the past few years that provide an overview of the health and development of school-age children and adolescents in Armenia[16].

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[9] Private schools, for example, are often in a better position to try out new approaches, although there are also challenges with piloting interventions in such settings in terms of replicability.
[10] http://www.hbsc.org/countries/armenia.html
[11] http://www.cdc.gov/tobacco/global/gyts/factsheets/eur/2004/armenia_factsheet.htm
[12] www.unicef.org/ceecis/0701-RAR_en.pdf
[13] http://crin.org/resources/infoDetail.asp?ID=22301&flag=report#aa
[14] http://www.espad.org/sa/node.asp?node=741
[15] For an example of what could be achieved see the role of the *Arabkir* Joint Medical Centre (JMC) - Institute of Child and Adolescent Health in relation to the analysis and dissemination of the available statistics on child health and development
[16] See for example:
National Strategy on Child and Adolescent Health and Development (2008)
National Programme on the Response to HIV Epidemic in the Republic of Armenia 2007-2011
UNICEF Armenian Office Mid-Term Review Report YPHD Project 2005-2007
Youth Friendly Health Services Concept paper (2005)
Child and Adolescent Health and Development in Armenia, Babloyan A et al.

It is not the purpose of this review to repeat what is available in existing reports. However what is clear from these publications is that health services for school-age children and adolescents in Armenia need to be able to respond to a range of acute and chronic diseases, to physical and mental health problems, and to a range of high-risk behaviours that are common during this period of development. Although a number of the surveys that have been carried out indicate that for some of the behavioural indicators, and their determinants, Armenia is in a less serious situation than other countries in the region, in general the trends are negative and, in addition, it is important to be prepared for the kinds of adverse tendencies that have taken place in other transitional countries.

Morbidity per 100 000 children's population (ICD X)	**2004**	**2008**
Infectious diseases	3541	4738
Tumours	17	40
Endocrine, nutritional, metabolic and immune disorders	467	518
Blood diseases	601	798
Neural system	2018	4731
Cardiovascular system	45	97
Respiratory system	16 435	24 231
Digestive system	1858	2516
Urogenital diseases	406	738
Skin diseases	930	1840
Bones, muscles and connective tissue	112	202
Congenital disorders / anomalies	144	247
Some specific perinatal diseases	507	526
Traumas and poisoning	1736	2178

There are far less data available on vulnerable young people and on school-age children and adolescents at particular risk of physical and mental ill health, either in terms of the size of the vulnerable populations[17], or their health problems. This is likely to be important data to collect as the economic situation is likely to negatively affect many of the structural factors that underlie the health and development of this group of the population (see for example the UNICEF CEE/CIS regional report on *Education for Some more than Others*[18]).

[17]Vulnerable groups include adolescents who are abused, neglected and abandoned (including adolescents who have early sex: "breaking the rules", "left behind children" from parents who have migrated for work, and the children of parents who are unable to cope), adolescents using drugs and alcohol, living on the streets, with behavioural disorders or mentally ill, and adolescents in most-at-risk populations (MARPs) in relation to HIV.

[18] http://www.unicef.org/ceecis/education_13048.html

4. Health Services for School-age Children and Adolescents in Armenia

4.1. Achievements

During the Soviet era there were extensive services in schools involving doctors, dentists and nurses, with regular screening being carried out. There were also adolescent doctors in the polyclinics, although these were primarily concerned with ensuring that boys were fit for the army. Despite the fact that following independence these posts were abolished, progress has been made in responding to the needs of adolescents in a relatively short period of time, with a number of approaches and models having been developed, although there continue to be challenges relating to sustainability and scale.

The MOH supports one nurse for every school with more than 350 pupils (for schools, a nurse attends to more than one school)[19]. The school nurse has links to the local polyclinic and is primarily responsible for first aid and epidemic response (on advice from the local polyclinic). She is also frequently involved in the organization of the routine screening that takes place.

There is the potential for a psychologist to be employed in schools, although this is a decision for the principle of the school (in terms of priorities and allocation of funds), and although it was frequently mentioned as something to consider, in general it does not seem to happen[20]. The MOES is currently requesting funds to be made available to include a school psychologist in schools from 2012, although the MOH has not so far involved with this request (in the FGDs with polyclinic doctors the need for a psychologists in the polyclinics was also frequently mentioned).

In addition, there are curriculum-based health-related programmes in schools. Fifty six hours of classes on "Healthy Lifestyles", including ASRH and HIV, are being introduced into 8, 9, 10 and 11th grades, to be taught by the physical education or

[19] In addition to providing health services and supporting other sectors, such as the education sector, both to do what they need to be doing to improve the health and development of school-age children and adolescents and also to support the provision of services, other key functions of the MOH include:

- The collection, analysis and dissemination of the data required for advocacy, policies and programming, including the data required for planning and monitoring interventions;
- Support for the development and implementation of coherent and supportive policies – macro policies (e.g. the focus on adolescents within national policies such as those dealing with tobacco and reproductive health) but also those that are unique to the period of adolescence and that have an impact on the provision and utilization of services (e.g. the possibility for minors to access services without parental consent);
- Overall governance and financing of the provision of health services, including prevention.

[20] There were previously psychologists in some schools, but the posts were abolished in 2004 due to lack of funds

biology teachers (building on previous experiences with health education classes that were taught in 8 and 9th grades). Materials have been developed for teachers (although not for pupils) and these are starting to be used in the schools.

Teachers are being trained to teach these new subjects and use more interactive teaching methods, but it remains a challenge to deal with sensitive issues (e.g. sex) and to use the newer participatory approaches, and there is currently no system for assessing quality or impact. However, school children seem to be positive about these new courses. The school nurse is not currently involved in the "healthy lifestyles" classes, although she herself is responsible for first aid training for boys in preparation for their military service[21].

There is also a new initiative underway to develop Health-Promoting Schools. The project will take place initially in three schools and will focus on ensuring that: the health education included in the lesson plans is based on approaches related to behavioural change and upgraded skills; the students' opinions on health issues are taken into account; a school health promotion policy is elaborated; there is reformation of the school's physical and social environments; enhancement of life skills; establishment of effective relationships with parents and community; and the creation of an efficient model of healthcare services.

In addition, there is a pilot school feeding programme that is being supported by the World Food Programme (WFP) which provides a hot meal for 1-4th grades, and there are plans to scale this up to cover 50,000 school children. The aim is to improve nutritional status, although there is no base-line data and no routine monitoring. There is also no explicit links to the school nurse or to any health education that is taking place in the schools.

There are a number of mandated screenings that take place from pre-school to school leaving (see Annex 3 for details) which provide regular contact between health workers and school-age children and adolescents, although there are many questions relating to the content and frequency of the screenings that are being carried out.

The introduction of a youth-friendly health services approach was started in Armenia in 2003 by the Pan Armenian Association for Family and Health, with support from IPPF, UNFPA and other partners working within the framework of a project focusing on the improvement of sexual and reproductive health of women, men and young people. In 2005, UNICEF and the *Arabkir* JMC- Institute for Child and Adolescent Health contributed to further YFHS developments, and subsequently UNFPA provided support to develop YFHSs in the context of their Reproductive Health Initiative for Youth in the South Caucuses (RHIYC), the services being provided through a range of settings (health facilities, youth centres, educational facilities and the military), with the content being varied to fit the capacity of the service provider in these different settings (for example there are no clinical services in the youth centre-based AFHS).

[21] There were some suggestions during the FGDs that the content of this first aid training needs to be reviewed.

There are currently 34 "youth-friendly" centres (32 as part of the RHIYC project, and 2 that are funded by the Japanese International Cooperation Agency (JICA), both of which are in health facilities but linked to schools). The YFHS centres are provided in a separate room, to ensure privacy and confidentiality, the facilities have been renovated and equipped (including information materials, computers and DVDs), and the health staff working in the YFHSs have been trained. There is currently funding in the Global Fund for AIDS, TB and Malaria (GFATM) proposal to support the provision of HIV testing and counselling (HTC), condoms and information materials in the YFHS, and plans to develop a peer programme to contribute to awareness raising and monitoring.

Standards have been developed for the YFHS, although these have not yet been adopted by the MOH. The WHO Orientation Programme on Adolescent Health for Health Workers (OP) materials have been adapted for use in Armenia and a three half-day training programme is being used for in-service training for the doctors providing services in the YFHS. Different models of YFHS were initiated in 3 pilot sites, and a campaign for raising awareness about adolescent health issues was conducted in 2007, with a number of TV programs and the development of thematic booklets and posters for adolescents.

In addition to the in-service training for doctors involved with the YFHS initiative, with the support of UNICEF and the "Arabkir" JMC- Institute of Child and Adolescent Health, an hour on adolescent health has been included in the pre-service curriculum of doctors and nurses (although the capacity of the trainers requires strengthening).

In terms of vulnerable groups, there has been NGO involvement with primary prevention of substance use (including early warning in schools) and interventions for drug users (e.g. rehabilitation), although with little support or engagement from the government. A summer camp has also been organized for children and adolescents with chronic illness and disabilities, which has proven to be beneficial for both the children and their parents, and has included some information on "healthy lifestyles".

For the most part, NGOs are playing the key role in responding to the health needs of vulnerable children and adolescents, and there is little involvement from the MOH. As one example, the FAR Children's Support Centre Foundation has a hotline for abused and neglected children and adolescents, and an emergency shelter that provides short-term rehabilitation services for vulnerable children 3-18 years of age. The centre is open 7/7 and provides a range of services through a multidisciplinary team with linkages to external service providers (e.g. polyclinics). Children and adolescents are referred to the centre by a range of individuals and organizations (frequently the police). Two thirds of the children and adolescents are reunited with their families and one third are referred to institutions[22].

4.2. Challenges

The education system in Armenia suffered a great deal after independence. It is trying to solve urgent problems, providing basic education to all children, but

[22] There are significant numbers of people interested to adopt these children, but currently no funds available to support this.

increasingly focusing on the quality of what is taught. But there are no resources to focus on the overall wellbeing of children, even if this is the ultimate goal. No recent Education sector policy documents have included anything about the health of adolescents, apart from those dealing with health education (knowledge and skills for health).

In terms of the "healthy lifestyles" training, parents are already concerned that the curriculum is too full and placing too much pressure on pupils. There is also some concern that teachers have not been adequately trained to use the materials that have been developed, or to deal with sensitive issues such as sexual and reproductive health. How to select and support teachers remains a challenge (currently mostly the physical education teachers are carrying out this training) and there is currently no monitoring of quality control, despite the fact that all the evidence indicates that maintaining quality is essential for the effectiveness of such programmes. There are also no linkages between the teachers providing the Healthy Lifestyles training and the school nurse or polyclinic doctors. The MOH does not seem to have been much involved with the development of the materials used in the "Healthy Lifestyles" curriculum, nor is it linked to the implementation of this programme.

Many people interviewed indicated that there was a need for stronger collaboration between the health and education sectors, in view of the close links between children's health and their capacity to learn; their educational status being important for their overall health and development; and the role of schools in improving children's capacities and life chances, not just their intellectual capacity. However, collaboration between the health and education sectors is difficult when there is competition for resources, even if systems exist to facilitate such collaboration.

There were similarly a number of comments about the need for stronger links with parents, in view of the important roles that they play in children's health and development, in terms of the provision of information and as a key protective factor (e.g. connection, regulation, respect, modelling and provision/protection).

In terms of the routine screenings that are being carried out, there appears to be very few routinely collected statistics that provide any indication of the effectiveness of the screenings – data are collected for submission to the central level but this primarily focuses on statistics for financial reimbursement. There are currently a wide range of screenings that take place (see Annex 3), including vision, hearing, height, weight and BMI, haemoglobin, blood pressure, sonography, dental examinations, and scoliosis screening. There is also Tanner staging and a psychosocial development questionnaire based on HEADSS (**h**ome, **e**ducation and employment, **a**ctivities, **d**rugs, **s**exuality, **s**uicide/depression), although there seems to be significant resistance to carrying this out the HEADSS screening because of the time that it takes to complete, and problems with adolescent boys who, as they grow older, do not want to be examined by a female doctor, particularly in relation to Tanner staging.

Reassessing the screenings that are carried out on this age group is taking place throughout the European region[23]. There are many reasons why screening of school children is carried out, including: evidence-based public health; wanting to show that something is being done for adolescents (political motivation); wanting to do something for adolescents but lacking clarity about other options; and historical reasons ("it is what has always been done"). It is important to be clear about the rationale for the screening and to be able answer a number of key questions:

- Is it a useful thing to do (does the procedure diagnose previously undiagnosed conditions of public health importance for which something can be done, and is likely to be done in terms of the availability of referral services)?
- How often does the screening need to be done (1-2 times during the school years, every year, etc.)?
- What is the coverage of the existing screening procedures, and which children are not coming, and why?
- How are the results used (individual treatment, monitoring conditions during adolescence, monitoring the screening procedure)?
- Is it a good use of time and resources in terms of other things that might be done to improve the children's/adolescents' health and development?

During the key informant interviews and FGDs respondents indicated that apart from the school entry screening, the sonography screening and the screenings that are organized prior to military service, there is variable attendance for the screenings that are provided, with parents and adolescents not always seeing the screenings as useful ("the children already have too much work and this is just an additional burden"). In general this contact with school-age children and adolescents is rushed and is not used to provide them with information or respond to questions that they may have about their health and development. In addition to the routine screenings, yearly screening is also mandated for all school children in order to assess whether they are fit for physical education – the rationale and outcomes of this screening also need to be reviewed.

There are many reasons to develop health services in schools, not least that there is a captive audience, and "if the child doesn't go to the health service, the health services need to come to the child". Although school nurses are an important health resource available in all schools: she is based where the school-age children and adolescents are, and she has links to the polyclinics. However, there are several challenges. Not only is her job description limited, but also the status of nurses in general in Armenia is not high, and even among nurses the status of the school health nurse is low. School nurses are less well paid than other nurses (they are reimbursed on a per capita basis), and in general, as it stands, it is not the kind of job that is likely to attract high calibre nurses.

Although activities are taking place within the health sector to improve services to school-age children and adolescents, there are a number of challenges in terms of ensuring that what is developed and strengthened is realistic and likely to be effective; that it contributes to improving adolescent health in general, strengthens the overall organization of the health system/services in a range of settings (i.e.

[23]See for example *Pairing Children with Health Services: the results of a survey on school health services in the WHO European Region*, WHO EURO (2010) www.euro.who.int/.../health...health/.../pairing-children-with-health-services

polyclinics and schools) and develops school health services; and that it improves coordination between different sectors and actors.

In terms of YFHS it is first important to deconstruct the "youth-friendly health services" concept. In essence this is an approach to support the health system respond more effectively to the specific needs of adolescents, taking into consideration their priority health problems (epidemiology), overall public health policies and approaches, and available resources. Specific attention is given to availability, accessibility, appropriateness and effectiveness (issues of concern for health systems in general in relation to other population groups), and the approach usually requires some re-organization of the services, training of health workers and other staff, and demand creation and community support.

Although there have been experiences with different models of "YFHS" in Armenia, and significant resources directed to their development, the coverage remains limited, there has been little routine monitoring or evaluation to assess the advantages/disadvantages of the different approaches or settings in which they are provided, or to indicate if the services are being used – there is no routinely analysed statistics on utilization by age or sex, and no on-going assessments of the quality of the services that are being provided. Much of the focus of AFHS has been on SRH, which remains a sensitive issue for many people and adolescents in Armenia clearly have needs beyond ASRH. There is also concern that the services are unlikely to make contact with adolescents before problems start, so have a limited role in terms of prevention and promotion.

In the key informant interviews, many issues were raised about YFHS: what is the vision for YFHS in the country, how sustainable is the current approach to YFHS, what would it take to institutionalize YFHS into the current health system (few funds are available for in-service training), how might the model differ for rural and urban areas, how can their impact be measured, and would it be possible to provide services for vulnerable adolescents through such facilities?

NGOs are currently providing the main response to vulnerable adolescents in Armenia, and it will be important to identify ways in which the MOH can play a stronger role, for example in terms of setting standards, developing and disseminating programme support materials and providing overall governance. It is an on-going challenge to reach adolescents out of school.

The provision of services for children with physical and mental disabilities has seen important positive developments in the recent past, through the *Arabkir*-JMC Institute for Child and Adolescent Health, including the gradual regionalisation of services. However, for other groups of vulnerable children and adolescents the situation remains challenging. There appears to be little engagement by either teachers or doctors to help identify children who have been abused (or bullied), the policies for reporting are weak and the result of reporting is often not satisfactory, with some punishment of perpetrators but little assistance for those abused. There seems to be a level of indifference within the health system and a desire to "hush-up" any problems in schools (e.g. bullying).

Stronger policies, clearer job descriptions (for school nurses and the vice-directors of schools who have responsibility for the "school environment") and training (for teachers and health workers) could make an important contribution to responding

more effectively to abuse and neglect of children and adolescents: despite resource constraints, the existing potential is underutilized. In addition there is a need to link schools, health facilities and other relevant services, that are currently very segmented, to respond more effectively in terms of early diagnosis and intervention; to support and strengthen the existing NGOs that are attempting to respond to the problems of vulnerable children and adolescents; and to tap into and strengthen other resources in communities (there is distance learning and Saturday-only training possibilities to develop basic skills). The first social workers were trained in Armenia in 1996, and there is now a steady stream at Bachelors and Masters level of social workers being trained, as there are for psychologists. But there appear to be few jobs for them, despite the expressed need.

4.3. Key Issues raised during the Focus Group Discussions

Polyclinic Doctors

A wide range of health problems affecting school-age children and adolescents were identified by the doctors participating in the FGDs, ranging from common endemic diseases and emergencies to health problems identified during the routine screenings that take place, such as vision problems and musculoskeletal problems (what you look for you find). Dental problems were also frequently mentioned, as were the emerging behavioural problems and mental ill health.

Apart from the contact that the doctors have with this age group during the routine screenings, they generally had relatively few adolescents attending the polyclinics. There was some suggestion that the numbers might be higher in those clinics where there was someone explicitly responsible for adolescent health who had received specific training.

The polyclinic staff identified a range of issues that needed to be resolved if services for adolescents were to be improved. With the exception of the pre-military screening, attendance for routine screenings is generally much less than 100% - parents either do not see the screenings as being useful or they want to hide illness in their children, particularly their girls. Referral is often a challenge, both because there are limited people with adolescent expertize at secondary or tertiary levels, and also because there is often a need for payment for the services. There is a need for strengthen links between polyclinics and schools, to adopt standards for the provision of health services to adolescents, and to have information materials that can be distributed to adolescents who attend the polyclinics.

In terms of solutions, there was a strong emphasis on the need for the staff of polyclinics to receive training to provide improved services to adolescents, in particular in relation to the provision of psychosocial support (the issue of having psychologists in schools and/or polyclinics was raised in several of the FGDs, as was the need for doctors in schools, although the resource implications of such a developments were recognized as being generally prohibitive in the current context, and even the value-added was not always clear). There is a need to be able to provide school-age children and adolescents with health-related information, and to strengthen the engagement of parents.

It was noteworthy that although the majority of doctors had not received any specific training to help them respond to the needs of adolescents, in two of the polyclinics where training had taken place within the context of the development of YFHS, the doctors concerned provided some good examples of using the skills that they had developed to provide counselling and support to adolescent patients. In general, however, the polyclinic doctors expressed their concern that they had neither received in-service training nor pre-service training on adolescent health.

School nurses currently provide an interface between schools and polyclinics, and it was clear from the discussions with them, and the school principles and the polyclinic doctors, that there is a wide variation in their capacity and the enthusiasm with which they carry out their functions. Their main responsibilities include first aid and hygiene (of individuals and more generally in the school); school-based responses to disease outbreaks; and assisting with the organisation of screenings in schools and in the polyclinics, both the routine screenings and those that are carried out prior to school children taking part in physical activity.

School children

In general, the children included in FGDs were well aware of the health services available to them in their communities (although even in those communities where YFHS had been initiated, they did not now that there were clinics with special doctors for adolescents). For the most part school-age children and adolescents would not think of going to the polyclinics without their parents, and had no experience of so doing. There were a number of issues identified that decreased adolescents' use of services, for example waiting time, opening hours and the perceived competence of the doctors, although many of the challenges would be true for most population groups and it was sometimes difficult to ascertain whether the comments reflected the children's experiences or the attitudes of their parents.

Almost without exception the children and adolescents included in the FGDs wanted more information, although despite suggesting that the school nurse and the polyclinic doctors should do this, in general the information that they do have has been obtained from other sources: the internet, mothers for girls, friends. But in general they do not have good sources of reliable information, or people to whom they can go to answer their questions about their health and development.

A number of suggestions were made for improving the services, including strengthening the competence of the health workers, increasing the availability of information materials, and improving access and confidentiality. Many of the children included in the FGDs had had good experience with school nurses.

5. Options for Strengthening Services for School-age Children and Adolescents

It is challenging in times of socio-economic transition and financial and resource constraints to think of expanding interventions in the health sector, even if such interventions are directed to a group of the population whose health and development will be crucial to future public health. Any developments will have resource implications in terms of training, health workers time, supervision and monitoring.

The overall approach to identifying options for strengthening the provision of health services for school-age children and adolescents has therefore focused on identifying three types of interventions that could be considered for inclusion in the basic model of services[24], that would help to strengthen prevention and provide the information and support that is required during this rapid phase of development, and provide early diagnosis and treatment for acute and chronic diseases, both physical and mental:

1. Interventions that are currently available, are included in the existing MOH budget and have already been taken to scale as part of the health system - that could be strengthened and if necessary reoriented;
2. Interventions that have already been developed and piloted, that are limited in coverage and are primarily dependent on external financial support – that could be modified, if necessary, and implemented more widely;
3. Interventions that will need to be implemented in order for the other interventions (1 and 2 above) to be effective – that should be considered for development.

For each of these interventions, the advantages and disadvantages have been identified, and priority actions have been outlined that would need to be undertaken before the interventions could be considered for inclusion in the core package and subsequent wide implementation.

When considering the different options, several over-riding issues need to be taken into consideration:

- *Advocacy*: there is an on-going need for advocacy to support the allocation of resources to school-age children and adolescents, starting in the parliament, in order to engage all sectors and ensure adequate attention to this group of the population in their budgets. Healthy adolescents are not only important within the life-course for public health, but also for many other reasons including economic development, national stability/security and human rights.

[24] Every attempt has been made to limit the interventions included in the core model for provision of services. This is not to imply that other options should not be considered at a future date or piloted in order to explore issues of impact and sustainability.

- *Primary care*: the review has focused on interventions at primary care level. The fact that secondary and tertiary levels of care have not been included should not in any way been seen as implying that these other levels of the health system are not important. On the contrary they are very important because if these are not also strengthened there cannot be referral or the training, guidance and mentoring that staff in the secondary and tertiary levels provide to staff working at primary level.
- *Heterogeneity*: school-age children and adolescents represent an extremely wide and diverse group, and in the development and implementation of all of the options that are outlined it is essential to give adequate attention to the different needs of different groups. Age[25] and sex are particularly important factors to take into consideration.
- *Evidence base*: it is extremely important at all times, but particularly when resources are limited, to ensure that the content of interventions is evidence based. There is therefore a need to review critically what is done, for example in terms of screening, even if it has been done for many years.
- *Coverage, quality and cost*: whatever package of interventions is selected for inclusion as the basic model for providing health services to school-age children and adolescents, the components will require adequate attention to monitoring (something that has been a weakness in several of the interventions that have been reviewed).
- *Policies*: a review of policies and laws of relevance to adolescents has already been carried out in 2006-2007, for the parliamentary hearing on youth health problems organized within the context of the campaign to raise awareness about adolescent health issues[26]. It remains important to ensure that attention to adolescents is included in all national policies/strategies, and that the issue of privacy and confidentiality is clear and consistent.

5.1. Strengthen, reorient and develop interventions that already exist in the health system

There are obvious benefits to starting to improve the provision of health services for school-age children and adolescents by focusing on those interventions that already exist in the system: they are accepted, they are funded, there is some experience with implementing them and an understanding of their strengths and weaknesses.

[25] The present review has not included any attention to older youth, those young people in the 20-24 year old age group. This should not be seen as implying that they do not have specific problems with accessing health services – they were not included because they were not part of the remit of this particular review.

[26] The following laws relate to the issues of adolescents: *ROA LawS on Health Care and Service Provision to the Population* (1996); *the Rights of the Child* (1996); *Reproductive Health and Reproductive Rights* (2002); *Prevention of Infection Due to Human Immunodeficiency Virus* (1997)*; Mental Health Care (2004); Narcotic and Psychoactive Substances (2002); and Restriction On Sales, Realization and Use of Tobacco*

Besides the above-mentioned laws issues related to child and adolescent health protection are also addressed in the following laws: ROA *Law on Education*; *Sports for Children and Youth* (2004); *Social Protection of Children without Parental Care*; *Public Benefits*; *Social Support*; *Civilian Registry*; and the ROA *Labor Code and Criminal Code*

5.1.1. School health services (school nurses)[27] [28]

The majority of schools already have a school nurse who is financed by the MOH. This is a health service that is provided *where school-age children and adolescents are* for most of their day.

Advantages

- School-age children and adolescents are a captive audience, and although a percentage of children do not finish school, the majority do.
- There is an existing infrastructure of school nurses, financed by the MOH but working in MOE premises (and often also working in the polyclinics).
- School nurses are an existing link between schools and polyclinics, and could contribute to the linkages between the school and parents (e.g. to provide them with information) and on-going support for children and adolescents with chronic illness.
- There are curriculum-based interventions in schools that focus on "healthy lifestyles" that the school nurse could contribute to - such contribution could in turn increase her credibility and contact with the school pupils.
- There are initial developments for health promoting schools, which would focus on the wider school environment and provide support for, and be supported by the school nurse (the draft "Healthy Schools" project document includes some focus on the provision of health services in schools).
- There are plans to develop school feeding programmes that the school nurse could link with to provide nutritional advice and support.
- Strengthening the role and scope of school nurses would be in-line with current developments in relation to school health services in the European region[29].

Disadvantages

- School nurses play an essentially first aid and epidemic-response role, and in general are only minimally involved in supporting health education activities in the school or in providing counselling to pupils.
- School nurses are sometimes over-extended (as a result of the per-capita system of funding).
- School nurses are not well paid and have low "status", so are unlikely to attract high calibre nurses.
- The attitudes of pupils and parents towards school nurses are often not very positive – it would likely take considerable work to overcome such attitudes

[27] During this review there has been a specific focus on schools. However, many of the issues raised have implications for training colleges (where people start at the age of 16 years) and the military (which is compulsory and takes place during late adolescence).

[28] Several people interviewed indicated the need for doctors to work in schools, and psychologists. This has not been included because of the resource implications and the lack of clarity about what the value-added would be for the activities under consideration, and the potential overlap with the staff of the polyclinics. Once these questions have been clarified through carefully implemented and evaluated pilot projects the situation should be reviewed.

[29] See for example "Pairing Children with Health Services: the results of a survey on school health services in the WHO European Region", WHO EURO (2010)

Actions

In order for school nurses to play a stronger role in providing appropriate, accessible and relevant health service to school-age children and adolescents it would be important to:

- Review and develop the job description of school nurses with a view to expanding their activities from reactive to proactive, including the provision of information and basic counselling.
- Provide them with training, supervision and support (from the polyclinic) – this would be essential if their image and capacity were to be improved.
- Ensure privacy and confidentiality for them to work with pupils.
- Improve their status and remuneration.
- Monitor their activities.

5.1.2. Pre-school, 12 and 15-year old check-ups (polyclinic doctors[30])

All school-age children are required to be examined before school entry and subsequently from the age of 10 years on a yearly basis up to the age of 15 years of age (and then more frequently for boys prior to joining the army). In addition to the polyclinic family doctors/paediatricians, there is involvement by gynaecologists, dentists and neurologists at specific times. It is important to take advantage of this contact between adolescents and health workers in order to respond to their health needs more effectively.

Advantages

- The check-ups are already mandatory and there is a system for carrying them out – the school nurse and the polyclinic doctors are responsible for organizing and implementing the check-ups.
- The check-ups already play a role in strengthening the links between health services and schools.
- An expanded content of the check-ups would help to meet adolescents' expressed needs for increased information and opportunities to discuss their concerns - the contact that health workers have with adolescents is an important opportunity to provide information and respond to their health and development-related questions (at a minimum).
- If the content of this interaction between health staff and adolescents were to be expanded, training the staff of polyclinics could begin to provide the rudiments of developing services that meet the needs of adolescents (AFHS).
- The pre-school check-up could provide an opportunity to start to make contact with parents and provide them with information/support (and an expanded content could increase their interest and engagement with the check-ups).

Disadvantages

- Attendance at the check-ups seems variable, and parents are not always motivated to take their children for screening.
- There is no standardized system of monitoring the screening activities or their impact in terms of referral and resolution of the problems identified.

[30] Several people interviewed expressed the need for psychologists in the polyclinics. This has not been considered here because of the resource implications and the need to be clear about the need for psychologists *vs* the need for polyclinic doctors to receive training to develop their counselling skills for working t primary care level.

- The current focus of the check-ups is screening, and in general there do not appear to be any experiences of using this as an opportunity for adolescents to raise questions and provide them with information (although this is variable).

Actions

If the routine check-ups were to make a contribution to the provision of services for adolescents it would be important to:

- Review the content and frequency of the screening in order to assess the evidence-base for the activities that have been included and its impact on the problems identified (in terms of referral and follow-up).
- Clarify the additional activities (e.g. non-judgemental listening and information provision) and the implications of an expanded content for the time allocated per pupil.
- Provide the staff involved with training (e.g. a shortened Orientation Programme and an introduction to the Adolescent Job Aid and basic counselling skills: total of four half day sessions) and support materials.
- Ensure that there are sufficient age-appropriate materials to provide to school-age children and adolescents.
- Identify ways to ensure privacy and confidentiality.
- Monitor the outcome of the screening and the expanded content, and develop a routine surveillance system for data collection, analysis and dissemination.

5.2. Strengthen and scale-up projects that have been initiated/piloted and integrate them into the health system

Armenia already has some experiences with interventions that aim to increase adolescents' access to information and services, with the support of UN agencies (UNICEF and UNFPA) and NGOs (World Vision and others). These initiatives could provide the basis for increasing access to appropriate health services for *all* school-age children and adolescents.

5.2.1. Youth-friendly health services

Advantages

- Already have some experience with developing and supporting YFHS in Armenia and significant resources have been invested in developing YFHS in a range of settings.
- In line with "good practice" for strengthening the health sector response to adolescent health in the European region.
- Have developed materials for providing adolescents with health-related information.
- Have materials adapted to the Armenian situation (e.g. the WHO Orientation Programme on Adolescent Health for Health-care Providers and health-related information materials for young people developed by the *Arabkir* JMC - Institute for Child and Adolescent Health).
- Have developed standards for YFHS in the country, although these are still to be approved.

Disadvantages

- Unlikely that school-age children and adolescents will visit health services by themselves, without their parents, which may limit the potential of YFHS to respond to sensitive issues[31].
- Even where such services exist, adolescents may not know about them or that they can visit them by themselves.
- Resource intensive in terms of training, supervision and monitoring.
- The training would need to be reviewed and expanded since much of the focus of the UNFPA YFHS have concentrated on ASRH and on youth (15-24 years) rather than school-aged children and adolescents (7-19 years).

Actions

If the experiences with YFHS are to be taken to scale it will be important to:

- Evaluated the services that have been implemented in terms of coverage, utilization, content and quality, costs and sustainability.
- Review the information and training materials to ensure that they are able to respond to health problems other than ASRH.
- Identify sources of funding to ensure sustainability.
- Review and finalize the standards and ensure that they are adopted.
- Develop training materials and clinical guidelines.

5.2.2. Services for vulnerable adolescents:

Advantages

- Very important in terms of human rights
- Training and programme support materials have been developed for a number of groups (e.g. neglected and abused children/adolescents, children with physical and mental disabilities)
- Experience with implementing interventions/structures, and, in the case of physical and mental disabilities, with taking them to scale through a process of regional centres.
- It is likely that this is a group of school-age children and adolescents that will increase, and it would be good to be prepared.

Disadvantages

- Significant investments for relatively few children.
- In terms of physical and mental disabilities, much of the focus has been on smaller children, where the greatest gains are to be made.
- Much of the focus has been on the referral level of interventions: aspects of prevention and early detection require further attention (there is no universal approach or unified tool for assessment of the needs of a child with broad spectrum of health, educational and social problems).
- A lack of multi-sectoral collaboration and cooperation and in most cases the "case-manager" is not identified.

[31]Current legislation allows children over 14 years to obtain information without parental consent, but this is needed for accessing services until over 18 years.

Actions

- Based on the experiences of NGOs and the Institute of Child and Adolescent Health, identify a simple package for use at primary level (in schools and polyclinics) for identifying, referring and supporting vulnerable adolescents.
- Explore the potential of polyclinics to play a stronger role in the provision of services to vulnerable adolescents, linked to the activities of NGOs

5.3. Support for the provision of health services to school-age children and adolescents

In addition to ensuring that there is a positive and supportive policy environment and to using the mass media effectively to share information and generate support, there are three other activities that could both benefit and also benefit from health service developments.

5.3.1.Parents

Parents are a critical protective factor for the health and development of school-age children and adolescents.

Advantages

- Parents are clearly a key group in terms of providing information and a supportive environment.
- There are opportunities for working with parents through the schools and through the routine check-ups.

Disadvantages

- The evidence base for the effectiveness of programming with parents is not strong (although the experiences of the Institute of Child and Adolescent Health of involving parents have been very positive)

Actions

Develop information materials for parents that would inform them about the available services in schools and polyclinics, provide them with information that they can share with their children about "healthy lifestyles" and that can support their role as parents.

5.3.2. Providing information

One consistent issue that was raised in the focus group discussions, both those with adolescents and those with doctors was the need for more relevant and reliable health-related information.

A number of print information materials have already been developed, for example through the RHIYC and the *Arabkir* JMC - Institute of Child and Adolescent Health, and there have been good preliminary experiences with the mass media (TV/radio). However, important sources of information that were mentioned by a number of adolescents are the Internet and cell-phones.

Advantages

- Has the potential to reach large numbers of school-age children and adolescents and likely to be increasingly available to children and adolescents in Armenia.
- Has the potential to engage the private sector (at least in relation to sell-phones).
- Growing body of experience of using cell-phones to provide young people with health-information in other countries.
- UNICEF has expressed an interest to support Internet-based developments for engaging and informing children.

Disadvantages

- A source of information that will not be available to all school-age children and adolescents in Armenia (although developments now will prepare the country as access to the Internet and cell-phones increases).

Actions

- Develop an Internet site/on-line forum that can provide adolescents with information about their health and development.
- Develop information packages that can be shared via mobile phones and identify opportunities to work with mobile phone operators to support this aspect of programming.

5.3.3. Peers

Although evaluations of peer programmes have not always been positive, if adequately planned, funded and monitored they could make an important contribution to interventions in the schools and polyclinics, to generating community support for the programmes that are developed[32].

Advantages

- Helps to meet adolescents' rights to participate
- Could be linked to interventions in schools and polyclinics, and to any initiatives that are developed to provide information in innovative ways.

Disadvantages

- Require significant planning and support if the peer programmes are to be effective and sustainable

Actions

- Synthesize experiences of peer programmes from Armenia and from the region.
- Consider the development and implementation of peer activities in a systematic way, with adequate preparation and systems of support and monitoring.

[32]See for example http://38.121.140.176/web/guest/about-ypeer

6. Conclusions and Recommendations

There is significant interest in the health of school-age children and adolescents in Armenia, both political support at many levels, and also increasing experiences with interventions/activities. There is a growing information-base that describes the health and development of school-age children and adolescents in Armenia, and that outlines the current health and behaviour problems, the trends, challenges and gaps in service provision.

There are a number of policy/strategy and programme documents[33] that provide a basis for the key components of services for adolescents, and there are programmes that are already being implemented to increase school-age children and adolescents' access to health services, that could be strengthened and scaled-up. There are also some promising projects that have been initiated focusing on specific health problems (e.g. ASRH, physical and mental disability) and specific groups (e.g. vulnerable children and adolescents).

6.1. General considerations

Based on the available policy and programme documents, the key informant interviews, the focus group discussions with adolescents and the staff of polyclinics and general considerations of resource constraints and sustainability, strengthening the provision of heath services to school-age children and adolescents should be based o the following three approaches:

4. **Strengthen and reorient those interventions that are already part of the health system, are funded and are being implemented at scale.**

5. **Evaluate those interventions that have been piloted in order to assess their potential to be implemented to scale in terms of impact and sustainability.**

6. **Develop and pilot new health sector interventions that would support the effectiveness of those health service interventions that are being taken to scale.**

[33] See for example:
Armenia Health Systems Performance Assessment (2009)
National Strategy on Child and Adolescent Health and Development (2008)
National Programme on the Response to HIV Epidemic in the Republic of Armenia 2007-2011
UNICEF Armenian Office Mid-Term Review Report YPHD Project 2005-2007
Youth Friendly Health Services Concept paper (2005)
Child and Adolescent Health and Development in Armenia, Babloyan A et al

The provision of health services needs to be seen within the context of the other key areas of health sector action in relation to adolescent health and development: the collection, analysis and dissemination of strategic information; supportive policies; and strengthening links and activities in other sectors. All of these areas for action need to be given adequate consideration in the development of the three priority approaches outlined above.

The health services that are developed need to be able to contribute to the prevention, early diagnosis, treatment/care and referral for a range of common acute and chronic physical and mental diseases affecting 7-19 year olds in Armenia, including: respiratory diseases, renal and gastrointestinal diseases, trauma, allergies, asthma, diabetes, neurological and musculoskeletal problems, vision and hearing defects, and psychological problems, including ADHD.

In addition the services should be able to provide age and gender-appropriate information and counselling on a range of physiological and behavioural issues including normal physical and sexual development/puberty; hygiene, diet, nutrition and exercise; sexual development and reproductive health; tobacco, alcohol and substance use; and violence prevention.

It will be important to have consensus around the content of the minimum package of services for school-age children and adolescents, in terms of the priority health issues that it should be possible to respond to at primary care level (acute illness, chronic illness, physical and mental health, prevention and identification of high-risk behaviours), and the main strategies for responding (polyclinics, schools, outreach, referral), including information provision, screening, counselling (non-judgemental listening, information and guidance, referral), treatment and rehabilitation.

Each of the three components of the strategic approach to strengthening health services for school-age children and adolescents outlined above needs to be carefully monitored and evaluated, including costs and implications for sustainability. In addition, adequate consideration needs to be given to the gender dimensions of the different interventions proposed.

It needs to be emphasized that change is as much about process as it is about content. It will therefore be very important when considering the recommendations below that there is sufficient involvement and space for discussion for the range of actors who will need to be involved in accepting and implementing the proposed activities. In addition to possible changes in terms of what is done, consideration will also need to be given to the need for changes in the ways that activities are reimbursed.

It will also be essential to not only take advantage of the strong political will that currently exists in Armenia to improve the health and development of school-age children and adolescents, but also to ensure that there is on-going advocacy and awareness-raising to support the recommendations outlined in this report.

6.2. Streamline the screening of school-age children and adolescents

Although there is no clear guidance from WHO EURO on the content of screening programmes that should be carried out for school-age children and adolescents, reviews of the literature that have been carried out indicate that much of the screening that is traditionally done in schools is neither evidence-based nor likely to be cost-effective. The general trend in the European region is to move away from frequent screening activities for a range of possible health problems towards a more selective approach to screening (in terms of content and frequency), which can ensure better quality and follow-up, and, at the same time, to strengthen the capacity of service providers to respond to the concerns of adolescents, their parents and their teachers as and when these problems arise[34].

As already noted, there are many reasons why screening programmes are implemented apart from the purpose of identifying conditions early or pre-symptomatically so that they can be responded to in a timely and effective way. At the same time, heath staff may have the impression that screening programmes are much more effective than they really are. It is therefore very important if screening for school-age children and adolescents is to be reorganized that a range of perspectives are taken into consideration in developing new protocols.

Consideration should be given to the following:

- Limit the routine screening of school-age children and adolescents to screenings at school-entry, at age 12 years (the start of puberty) and during the 15-16 years period.
- Continue screenings for which there may be some evidence base in terms of public health, both for the individual and also as a basis for monitoring problems of wider public health significance, include checking immunization status, height/weight/BMI, dental check-ups, hearing (for school-entry), vision and HEADSS (for older adolescents). In those areas where it is warranted epidemiologically, anti-helminthics could also be considered at pre-school and 12 years.
- Review the evidence base, rationale and outcomes for other screenings that are currently being carried out, with a view to deciding whether to stop or continue them: urine analysis, haemoglobin, blood pressure, Tanner staging, sonography and the routine screening for physical education/sports[35].
- Ensure that there is adequate monitoring of all screening to avoid the current situation whereby the outcome and follow-up of screening is difficult to assess.

The school nurse should organize the routine screening, in collaboration with the relevant staff of the polyclinic. The participation of all children and adolescents should be ensured.

If the number and frequency of the screenings are decreased, this will free-up time for the school nurse and the polyclinic doctors to spend more quality time with the school-age children and adolescents, to provide non-judgemental listening,

[34] See for example: http://www.scotland.gov.uk/Publications/2005/04/15161325/13423

[35] In order to support this recommendation it may be useful to carry out a more detailed review of the current routine screening that would clarify what is meant to be taking place, and what is currently being done and effectively implemented; what the rationale is for the different components of the current screening, how it is being monitored, and what the follow-up is in terms of referral and actions for the problems identified; what the evidence base is for the effectiveness of the screening activities currently being implemented, including the screening that is carried out prior to students' participation in physical education classes.

information and referral as necessary, and to support other health-related activities taking place in the schools[36].

Consideration should be given to the development of simple information materials that provide pupils and parents with basic information about the screenings, and that inform them that if they are concerned about their health and development (or that of their children) they should visit the school nurse or family doctors/paediatricians in the local polyclinic.

6.3. Respond to the health concerns of adolescents, their parents and teachers

At the same time as the content of the screening programmes are limited and focused, there needs to be a strengthened capacity of school nurses[37] and the family doctors and paediatricians in the polyclinics to respond to the health and development concerns of school-age children and adolescents, their parents and their teachers, as and when these arise. Starting with the school nurses and the doctors involved with the routine screening, there needs to be training that helps them to:

- apply their existing knowledge to the adolescent age group ("what do I need to know and do differently if the patient is 16 and not 6 or 36 years old?")
- respond to common health and developmental problems during adolescence (e.g. the Adolescent Job Aid)

In order to do this it will be necessary to review and revise existing training materials that have been developed in Armenia (the one a half day training that has been based on an adaptation of the OP) and to include half a day on an adapted version of WHO's Adolescent Job Aid, which provides health workers with algorithms for responding to specific presenting complaints/concerns among adolescents and their parents.

If quality is to be maintained there will need to be both training and supervision, and in the longer term it will be important to include a stronger focus on adolescent health in the basic training of doctors and nurses. At the same time it

[36]Healthy life-styles: Although not a primary focus of this review, the fact that there is health education included in the school curriculum has important implications for the health and development of school-age children and adolescents. In addition, this is something that could benefit from and contribute to the role of the school nurse. All the evidence indicates that such programmes are only effective if the quality of the programmes is adequate in terms of content (what is taught) and process (how it is taught). These programmes would therefore benefit from an assessment (and subsequently will need a process for monitoring quality, and ideally impact on knowledge and intended behaviours). Curriculum-based interventions will be included in the Health-Promoting Schools project.

[37] If school nurses are to play a more proactive role it will be important to identify ways to improve their status and remuneration – to make this a desired job. A more in-depth assessment may be necessary that documents what they are doing (content and workload), what additional activities it would be realistic for them to do (early detection and referral, basic counselling what they would like to do/be willing and able to do, how *they* think that the status of school health nurses could be improved, and what the implications of this would be for their post descriptions, payment, reimbursement and incentives.

will be necessary to ensure that training on adolescent health is also provided to specialists in the polyclinic and relevant staff in tertiary institutions[38].

In the longer-term, and in conjunction with the health-promoting schools initiative that is being piloted in Armenia, a systematic approach to developing school health services would be warranted.[39]

6.4. Evaluate youth-friendly health services in Armenia

The above recommendations would already go a long way to making health services for school-age children and adolescents in Armenia "adolescent-friendly". However, additional activities could be implemented in line with good-practice.[40]

To this end, it is recommended to carry out an evaluation of the YFHS experiences in Armenia[41] in terms of coverage, utilization, content and quality, costs and sustainability. The UNFPA and JICA supported efforts provide an ideal opportunity to explore this in some depth since they have been implemented in a range of settings. The following questions need to be answered:

- Who is using the facilities (by age and sex) and for what kind of health problems;
- Has utilization increased as a result of the changes that have taken place;
- Has there been supportive supervision, are the quality criteria realistic and have they been maintained (what systems of monitoring are in place);
- What are the cost implications;
- What do young people think about the services?

Depending on the outcome of the evaluation, effective approaches that are identified could be expanded to wider scale in a systematic way, including a review and finalization of the AFHS standards that have been developed, and their adoption by the MOH (with criteria for monitoring their implementation).

6.5. Develop information materials and new interventions areas

Two important considerations for development in support of all of the above activities are information materials and new intervention areas.

Information materials are required for a range of target audiences (adolescents, their parents and other community members) and need to be provided through a

[38] The approach that the *Arabkir* JMC - Institute of Child and Adolescent health have developed for the identification and treatment of physical and mental disabilities in children might provide a useful model.

[39] WHO EURO has developed a systematic approach for developing school health services in countries in the region.

[40] See for example:
Adolescent-friendly Health Services: an agenda for change
http://www.who.int/child_adolescent_health/documents/fch_cah_02_14/en/index.html
Quality Assessment Guide Book: a guide to assessing health services for adolescent clients
http://www.who.int/child_adolescent_health/documents/fch_cah_9789241598859/en/index.html

[41] WHO EURO has recently produced a publication on "Youth-friendly health policies and services in the European Region: sharing experiences" and WHO Geneva has a range of publications to support the systematic development of YFHS and take them to scale

number of different channels: by school nurses and polyclinic staff; by peers; through mobile phones and the Internet; and by the mass media.

At the same time, strengthening linkages with parents (so that they are better able to inform their children, ensure that they participate in the routine screenings, and help them access the health services that are available) and exploring the potential for peers to be involved in the provision of information (both about health and about the availability of services) could make an important contribution to the interventions outlined above.

Annex 4 provides an overview of some of the key information and training materials that will need to be developed/adapted.

6.6. Improve monitoring and collaboration

For all of the above activities two over-riding programme elements will be essential.

First it will be important to strengthen collaboration between a range of sectors and partners. It is recommended that a working group be initiated to review these recommendations[42], identify key partners that need to be involved with their implementation, and initiate the necessary discussion fora in which a range of actors can discuss next steps in order to improve the services for school-age children and adolescents.[43]

At the same time, this report could provide a stimulus to strengthen and provide focus for existing collaborating mechanisms that exist in Armenia, principally between the MOH and the MOES at national level, and between the directors of schools and the heads of polyclinics at district level (this could initially be started in several pilot districts). An example of a model for strengthening collaboration is provided in Annex 4.

In addition to the importance of collaboration in implementing these recommendations, it will be important to give adequate attention to systems for monitoring what is implemented – something that is mostly lacking in relation to existing interventions. There is a need to strengthen the collection, analysis and dissemination of routinely collected age-disaggregated data, perhaps using as an example the role that the *Arabkir* JMC - Institute of Child and Adolescent health plays in analysing data from early child development. At the same time it will be important to ensure adequate monitoring systems to be able to track progress and assess the quality of the interventions that are implemented.

One important monitoring activity that has been developed in Armenia that requires on-going support is the HBSC survey, which not only provides data to assess trends within Armenia but also provides the opportunity to compare the health and behaviours of adolescents in Armenia with adolescents in other countries in the region.

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[42] At a minimum this working group should representatives from the MOH and the MOES, NGOs and UN Organizations, and ensure input from adolescents themselves.

[43] Following the feedback meeting at the end of the review, UNICEF agreed to support processes that would focus on three of the key areas for action: screening, the role of school nurses and collaboration

6.7. Develop a phased and costed 3-5 year plan

Develop a costed[44] 3-5 year scale-up plan for presentation and discussion at the national conference on child and adolescent health that is being planned for 2011, with the intention of ensuring buy-in and, where necessary, technical support from a range of partners, and obtaining longer-term "programme" rather than "project" funding. The plan should include a phased approach to implementing the package of interventions and activities outlined above, starting in a limited number of marz and linking with other relevant initiatives taking place in Armenia, such as Health Promoting Schools and projects that are being implemented to meet the needs of vulnerable adolescents[45]. In support of the recommendations above, additional elements for inclusion in the plan are provided in Annex 4.

[44] ADH/WHO Geneva has developed a draft paper on the Implications for Costing of Quality Characteristics of AFHS in Armenia

[45] It was not possible in the present assessment to review in any depth the provision of services to particularly vulnerable adolescents. Based on the experiences of NGOs with providing services for such groups, it will be important to identify key elements for inclusion at the primary care level (in schools and polyclinics): what are the lessons learnt about identifying vulnerable children and adolescents and meeting their health needs.

Annexes

Annex 1: Key Informants

Person	Organization
Dr. Ara Babloyan	Head, Standing Committee on Health Care, Motherhood and Childhood, ROA Parliament
Dr. Lena Naunshyan	Expert, Standing Committee on Health Care, Motherhood and Childhood, ROA Parliament
Dr. Karine Saribekyan	Head of MCH Department, MOH
Dr. Nune Pashayan	Chief Specialist of the MCH Department, MOH, Senior Officer
Ms. Narine Hovhannisyan	Head of General Education Department, MOES
Mr. Robert Stepanyan	Head of Developmental Programs and Monitoring Department, MOES
Mr. Artak Musheghyan	Head of "AIDS Prevention, Education and Care" (APEC)
Ms. Mira Antonyan	Executive Director, FAR Children's Support Centre Foundation
Dr. Naira Gharakhanyan	Former Children of Armenia Fund Officer, World Vision Armenia
Ms. Naira Sarsgyan	Social Mobilization and Partnership Adviser, UNAIDS Armenia
Ms. Aida Ghazaryan	National Programme Officer, UNFPA Armenia
Ms. Laylee Moshiri	Representative, UNICEF Armenia
Ms. Liana Kharatian	Programme Officer, WFP Armenia
Dr. Henrik Khachatryan	Programme Coordinator Family and Community Health, WHO Armenia
Ms. Inna Sacci	NOVA2
Ms. Astghik Grigoryan	USAID
Ms. Zara Mkrtchyan	Consultant on Health Situation Analysis

Dr. Eva Movsesyan	Public Health Officer, *Arabkir* JMC- Institute of Child and Adolescent Health
School Principles and Directors of Polyclinics	**Lori marz:** Vanadzor school No. 22 and Vanadzor"Gugark" Polyclinic **Shirak marz:** Gyumri "Foton" school and Gyumri Red Cross Polyclinic **Armavir marz:** Vagharshapat school No. 2 andVagharshapat polyclinic; Qarakert school No. 2 and Qarakert ambulatory **Gegharkunik marz:** Gavar school No. 4and Gavar polyclinic; Sarukhan school No. 2 and Sarukhan health centre **Yerevan:** Schools No. 12 and No. 179, "Artashesyan" polyclinic and "Manuk" polyclinic

Map of Armenia with geographical distribution of the schools and health facilities included in the review


REPUBLIC OF ARMENIA
AND REPUBLIC OF
MOUNTAINOUS KARABAGH
GEORGIA
GEORGIA
AZERBAIJAN
TURKEY
IRAN
SHIRAK
LORI
TAVUSH
ARAGATSOTN
KOTAYK
GEGHARKUNIK
YEREVAN
ARMAVIR
ARARAT
VAYOTS DZOR
SHAHUMYAN
MARTAKERT
ASKERAN
STEPANAKERT
SHUSHI
MARTUNI
HADRUT
SYUNIK
NAKHICHEVAN
(AZERBAIJAN)
Ganja
(Gandzak)
Lake Sevan
LEGEND
Populated places
YEREVAN Capital
Gyumri
Ararat
Artashat
Cities
Village
Monasteries, Churches
Garni
Sardarapat
Ani
Boundaries
State
Administrative
Automobile roads
Highway
Side road
Hotels
SCALE 1: 1 250 000

Annex 2: Questions for Key Informants and Focus Groups

Questions to ask key informants

1. What do you think are the major health problems facing adolescents in Armenia (e.g. health outcomes, risk behaviours)?
2. How important do you think adolescents are as a population group for overall public health in Armenia (e.g. non-communicable diseases)?
3. What are the most important things that need to be done in Armenia to improve the health and development of adolescents?
4. Do you think that there is sufficient information available to know what the health problems are among adolescents in Armenia and whether the national responses to improving adolescent health are effective (e.g. coverage, quality, attainment of national goals/targets)?
5. Are there any specific groups of adolescents who require special attention?
6. What are the main challenges facing the health sector in Armenia, and how do these affect the health sector's response to improving the health of adolescents (e.g. strengths, weaknesses, opportunities, threats)?
7. What do you think that the health sector should be doing to improve the health of adolescents (e.g. services, supportive policies, strategic information, strengthening other sectors)?
8. What programmes have been successful in improving the health of adolescents and decreasing high-risk behaviours (e.g. tobacco use, condom/contraceptive use)?
9. What are the main opportunities that could facilitate the health sector contribution to improving the health of adolescents in Armenia (e.g. the availability of child/adolescent health strategy, political commitment)?
10. What are the main challenges that need to be overcome in order for the health sector to contribute more effectively to the health of adolescents in Armenia (e.g. policies/legislation, resources)?

Questions to ask health workers (FGD)

1. What are the health problems facing adolescents in Armenia, by sex and age (10 – 14, 15 – 19, girls and boys)?
2. Do you see many adolescents in your practice – approximately how many per week or a month? What problems do they have?
3. What do you think are the main challenges with the provision of efficient health services in Armenia?
4. What do you think are the key contributions that the health system can make to the improvement of adolescent health/behavioural problems in adolescents?
5. What are the key components of health services that adolescents need for treatment and prevention?
6. What have been the success stories in your practice of providing services to adolescents?

7. Do you think that today's services meet all the needs of adolescents?
8. Have you ever received specific training on adolescent health. If so, where was it organized? Was it useful?
9. What guidelines/criteria do you use while working with adolescents?
10. What do you think would help you better respond to the needs of adolescents?
11. What other sectors do you think need to be involved in responding to the health needs of adolescents?
12. Do you carry out routine screenings? If so, what do you identify and what follow-up do you do? Do you find these surveys important? If not, why?
13. Do you provide consultation? If so, on what topics?
14. Have you heard of Adolescent-Friendly Health Services functioning in your community? If so, do adolescents use them and for what sort of problems?
15. Would you agree to be more engaged in adolescent health issues and make school visits?
16. Do you think that there is a need to have a specialized doctor for adolescents in the polyclinic?

Questions to ask school nurses

1. What are your main activities?
2. What are the main health problems that you see?
3. How much time is spent in the school/polyclinic?
4. Are there other things that you think you could contribute to in the school to improve adolescent health?
5. What are the main differences between younger children (6-12) and the older adolescents (13-17)?
6. Do you have much contact with parents?
7. Do the adolescents in your school receive routine screening at 12 years and 15 years? If so, what are the most common problems identified? Are you informed of the results of the screening and follow-up/referral activities?
8. Have you ever heard about YFHS?

Questions to ask adolescents (FGD)

1. Do you know what health services are available for adolescents in your community?
2. If so, from where and how do you know about them?
3. Have you ever used health services? If so, for what sort of problems?
4. Have you found answers/solutions to your problems from the health service staff?
5. Were the services free? Were the health workers welcoming and did they provide the services for you at a suitable time?
6. Have any of your friends advised you on health care services. If so, for what sort of problems?
7. What do you think are the main problems that you and your friends would go to health services for?
8. What sources of information do you use when you have questions on health?

9. Have you ever wanted to use a health service but in the end decided not to/couldn't use them? What was the reason? Do any of your friends have such experiences?
10. What types of services would you like to be offered in your health facilities: information, consultation, regular check-ups, treatment?
11. What do you think are the main problems of health care facilities that prevent adolescents from using them more often?
12. What do you think needs to be done to make the health services more available so that adolescents would use them more often?
13. What has been your experience of services provided through schools? Have you ever turned to a school nurse? Has she ever provided services or consultation?
14. What do you think needs to be done to improve the service/consultation provided through schools?
15. What would you or your friends do if you/they had concerns about your development, weight, height, wanted to lose weight, had problems with teeth, wanted to give up smoking, had concerns about a friend who drank much alcohol, were treated badly or abused at home?
16. Have your parents ever talked to you about health problems?
17. Would you like a nurse or a doctor to talk to you about your health problems?
18. Have you heard of Adolescent-Friendly Health Services in your community? If so, have you ever used them and for what sort of problems?

Annex 3: Statutory ambulatory polyclinic services for school-age children and adolescents[46]

Periodicity of preventive visits and immunisation	**Examinations and screenings** (Assessment by pediatritian/family doctor)	**Screenings which require special skills** (Assessment by pediatritian/family doctor or specialist)	**Laboratory/ specialized equipment examinations**
6 years old[47] (MMR, DTP,OPV)	Weight	Vision	Haemoglobin
	Height		
	BMI	Hearing	General analysis of urine
	Blood pressure	Dental (Stomatologist) Neurologist	Helminth analysis
7 years old	Weight	Assessment of growth	
	Height		
	BMI		
	Blood pressure		
8-9 years old	Weight	Vision	
	Height		
	BMI		
	Blood pressure		
10-11 years old	Weight	Examination of vertebral column (Pediatritian, Surgeon Orthopaedist)[48]	
	Height		
	BMI		
	Blood pressure		
12 years old	Weight	Vision	Haemoglobin[49]
	Height	Hearing	
	BMI	Assessment of sexual development[2] Filling in the questionnaire on psychological-social development	
	Arterial pressure	Dental	

[46]Extracted from ***Organisation of Provision of Health Care to Adolescents in the Primary Health Care Setting***

[47] During the entrance to the schools or preschool institutions the special screenings and laboratory analysis are implemented according to the volume of 6 years old children

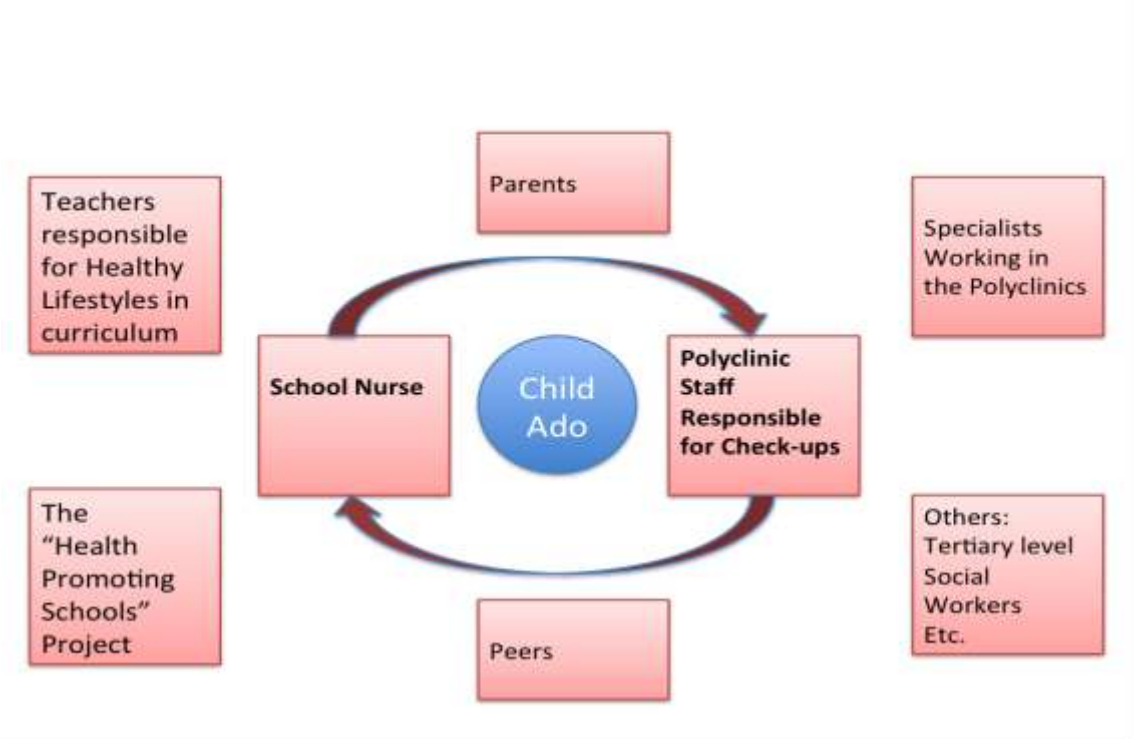
[48]The examination of vertebral column to detect scoliosis is implemented according to the methodology presented in annex 1b

[49] The allowed limit of change of the time of the examination is 14 years old

<table>
<tr><td></td><td></td><td>(Stomatologist)</td><td></td></tr>
<tr><td rowspan="4">13 -14 years old</td><td>Weight</td><td rowspan="4">Filling in the questionnaire on psychological-social development (Neurologist)</td><td rowspan="4"></td></tr>
<tr><td>Height</td></tr>
<tr><td>BMI</td></tr>
<tr><td>Arterial pressure</td></tr>
<tr><td rowspan="4">15 years old</td><td>Weight</td><td>Vision</td><td rowspan="2">Haemoglobin[50]</td></tr>
<tr><td>Height</td><td rowspan="3">Assessment of the sexual development[3]
Filling in the questionnaire on psychological-social development
Screening of girls[51] (Gynaecologist)</td></tr>
<tr><td>BMI</td><td rowspan="2">Sonography of pelvis</td></tr>
<tr><td>Arterial pressure</td></tr>
<tr><td rowspan="4">16 years old</td><td>Weight</td><td rowspan="4">Filling in the questionnaire on psychological-social development</td><td rowspan="4"></td></tr>
<tr><td>Height</td></tr>
<tr><td>BMI</td></tr>
<tr><td>Arterial pressure</td></tr>
<tr><td rowspan="4">17 years old[52]</td><td>Weight</td><td rowspan="2">Vision</td><td rowspan="2">Haemoglobin</td></tr>
<tr><td>Height</td></tr>
<tr><td>BMI</td><td rowspan="2">Filling in the questionnaire on psychological-social development</td></tr>
<tr><td>Arterial pressure</td><td>General analysis of urine</td></tr>
<tr><td>18 years old</td><td colspan="3">Before transferring to the adult polyclinic – according to the annex 15</td></tr>
</table>

[50] The allowed limit of change of the time of the examination is 16 years old
[51] The allowed limit of change of the time of the examination is 17 years old
[52]The examination of 16-17 years old boys (premilitary age) according to the N748-N decision of the Government of RA adopted on 10.07.2008

Annex 4: Making the Connections: Health Services for School-age Children and Adolescents in Armenia



The team	Responsibilities
School Nurse	Organize and support routine screening Provide information and support to school-age children and adolescents Provide first-aid training (content to be reviewed) Provide information to parents Identify problems for referral to the polyclinic Provide support for teachers during healthy lifestyle teaching
Polyclinic Family Doctors and Paediatricians	Carry out routine screening Provide information and counselling to school-age children and adolescents Contribute to health lifestyle teaching as appropriate Provide adolescent-friendly primary care services to school-age children and adolescents Provide information and support to parents Referral to tertiary services
Teachers	Implement healthy lifestyle teaching Identify problems for referral to school nurse and polyclinic staff
Parents	Active involvement and support for routine screening Interaction with school nurse and polyclinic doctors in terms of health and development concerns relating to their children (identification of problems)
Peers	Provision of information in schools and polyclinics
Specialists in polyclinics and tertiary facilities	Respond to referrals from primary level doctors Provide adolescent-friendly health care to school-age children and adolescents Provide on-going training for primary level health staff
Others: Social Workers, Psychologists, NGOs	Respond to referrals from school nurses and polyclinic doctors Strengthen the response to meeting the health needs of vulnerable adolescents

Health Services for School-age Children and Adolescents in Armenia

In order for these recommendations to be implemented, significant preparatory work will be required

1. **Develop a district-level pilot model and the necessary regulatory framework for endorsement during the Child and Adolescent Health Conference that is going to be organized in 2011.**
2. **Develop advocacy materials and guidance to assist managers at district level, including senior health and education staff, support the planning, implementation and monitoring of the pilot model.**
3. **Develop training/guidance materials[53] for school nurses that would strengthen their capacity to organize and support the routine screenings, respond to common health problems among school-age children and adolescents, provide information and when necessary referral for pupils. Consideration should also be given to exploring potential activities that could be carried out with parents.**
4. **Develop/adapt training materials for polyclinic family doctors and paediatricians, and local health post nurses, that would strengthen their capacity to provide routine screening, manage the common health problems of school-age children and adolescents, provide information and basic counselling, and know when and where to refer (using WHO's Orientation Programme and Adolescent Job Aid as a basis).**
5. **Develop/review existing training materials for secondary and tertiary level health care providers in order to strengthen their capacity to meet the specific needs of adolescents (what to know and do differently if the patient is 16 and not 6 or 36 years old).**
6. **Develop training materials for teachers in order to strengthen their capacity to identify children who need to be referred to the school nurse and polyclinic doctors, and that could contribute to the teaching of the Healthy Lifestyle lessons (in collaboration with the MOES).**
7. **Review/develop materials for school-age children and adolescents, and their parents, which provide basic information about common health problems and developmental concerns.**
8. **Explore options/the need for involving psychologists, either in the polyclinics or in schools (in collaboration with the MOES).**
9. **Explore options for strengthening linkages between polyclinics and schools, and Social Services and Child Protection regional units.**
10. **Explore options for involving NGOs, working with children, young people and health, in order to explore the development of peer activities and strengthen the attention to vulnerable adolescents.**

For all of the above there will be a need for awareness raising/advocacy for the health of school-age children and adolescents, and for consensus around monitoring criteria, indicators and tools to assess progress.

[53] For many of the training materials outlined, it will be possible to use/adapt/refine existing materials from Armenia or materials available within the region or that have been developed at a global level to strengthen the health system's capacity to respond more effectively to the specific needs of adolescents, a number of which are mentioned in this report.