ARMENIAN PUBLIC HEALTH ALLIANCE

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CONTEMPORARY ISSUES IN TOBACCO CONTROL POLICY IN ARMENIA

Yerevan, 2004

In developing this informative work, the specialists at the Armenian Public Health Alliance have aimed to study and present the multi-faceted issues caused by tobacco use in Armenia, as well as modern approaches to deal with these issues, based on international experience.

The Armenian Public Health Alliance, the main goal of which is to support advancements in public health, was established in 2001 through the mutual efforts of the following three organizations: "Armenian Public Health Union" NGO, "Armenian Public Health Association" NGO and the American University of Armenia Fund.

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The work is designed for representatives of legislative and executive authorities, as well as for professional audiences and the public at large. Distribution is free.

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PREFACE

Dear Reader:

We are pleased to present to you this informative work, where the working group of the Armenian Public Health Alliance has sought to present the multi-faceted issues caused by tobacco use in Armenia. The modern approaches, based on extensive international experience, are described in this work as well.

The current work consists of several sections including general information about tobacco prevalence, morbidity and mortality caused by tobacco use. The work presents the globalization trend of tobacco and the methods to combat it, which are embodied in the Framework Convention of World Health Organization (WHO). The next sections refer to the price and non-price means of tobacco demand reduction.

The non-price measures include:

- Protection from tobacco smoke;
- Prohibition or limitation of tobacco advertising, tobacco sales promotions and sponsoring;
- Regulation of tobacco packaging, labeling and content discosure;
- Limitations on tobacco sales.

Coming to the price and tax measures of tobacco control, we have presented the correlation between the price of tobacco and tobacco consumption, as well as the international experience of price policy, which shows the effectiveness and efficiency of the economic measures in reduction of tobacco consumption.

We hope that you will also be interested in information about the local sales of tobacco and the approved payments for imported tobacco, as well as the state budget profits from tobacco.

The issue of tobacco smuggling, which leads to economic losses and other vital problems, is described here as well.

In the last section we have shown that a part of costs caused by tobacco users is directly or indirectly imposed on non-smokers. This occurs either in the health care sphere at the expense of state funds, or at households, when tobacco, as a product of consumption, competes with food for families.

So, the consequences of tobacco use are many and require application of effective measures to overcome them. There are no easy and quick solutions for this problem. However, the successes of the international experience in tobacco control gives encouragement to us that Armenia will also be able to struggle against and overcome this enormous vice.

CONTEMPORARY ISSUES IN TOBACCO CONTROL POLICY IN ARMENIA

1. Globalization of the Tobacco Epidemic

It is difficult to deny today that use of tobacco perilously impacts human health. Unfortunately, very few people realize the disastrous consequences that the tobacco epidemic will have on the society These consequences can be avoided only by initiating appropriate measures.

The cause of death for every 10th person in the world is smoking. It is predicted that by 2030 every 6th death will be from tobacco use. This is more than deaths from AIDS, drugs, road accidents, murders and suicides combined[1]. In other words, tobacco will become the main mortality reason, taking approximately 10 million lives annually. Seventy percent of these deaths will be from low and middle income countries[2].

In Europe, tobacco use has become the cause of death for 1.2 million people annually (14% of all death cases). According to experts, if effective and efficient systematic methods against tobacco use are not initiated, then by 2020 the number will increase to 2 million (20% of death cases)[3].

This threat was realized in Western countries decades ago where they started to seek ways of protecting the population's health, as well avoiding tangible economic problems. It is also known that as a result of tobacco control, the tobacco industry's sales have narrowed in the West; they have now started to look for new markets in the East. Tobacco production has shifted from the high-income countries to the low-income countries, which has lead to tobacco addiction throughout the world. In Eastern Europe and the former Soviet Union, high rates if smoking are accelerated by the insufficient awareness of the population, underdevelopment of civil society, and the indifference of the state towards this issue. Free reign of the tobacco industry in Armenia and the region has played a major role in the prevalence of the epidemic.

The overall economic losses worldwide, caused by tobacco use, amount to at least $200 billion US dollars[4]. Economic losses related to tobacco use are:

- Health care expenditures for tobacco-related diseases;
- Reduction of productivity and temporary inability to work due to tobacco-related diseases;
- Losses related to premature death and/or inability to work;
- Loss of tax revenue from smuggled tobacco;
- Expenditures from fires and property loss caused by tobacco use.

Experience has shown that tobacco users have no clear idea about the high probability of morbidity and premature death. For example, in China, 61 percent of tobacco users believe that tobacco has a very slight impact on their health. During the past decades, the population's awareness in high-income countries about the dangers of tobacco use has increased. Moreover, during the last 50 years, the percentage of tobacco users has decreased from 55% to 28%[5] in the USA. It is clear that in developed countries, smoking has a wider prevalence in groups whose education and socio-economic level is low.

It is important to note that tobacco use generally starts at an early age. Beginner smokers underestimate future costs they may be incurred as a result of addictive nature of nicotine. As a rule, young smokers cannot fully evaluate the information about the negative impacts of tobacco on their health. It is known that often in youth, even if complete information is available, there is a propensity for dangerous behaviors, for example, reckless driving. . In some countries there are laws defining age limits for participation in elections, for marriage or for getting a driver's license. An age limit for tobacco use seems similarly logical and important, especially taking into account its addictive nature.

2. Smoking Prevalence in Europe and Armenia

In 2001 almost 30%[6] of the adult population of Europe belonged to the group of regular smokers. In the European region, 38% of men smoke; the prevalence of male smoking regresses from the East to the West from 60% to 20%. According to official data, 63,7% of men in Armenia are smokers; the prevalence of smoking among men of working age (15-54 yrs.) is nearly 67,5%. Thus, this indicator greatly exceeds the regional average and can be classified as one of the highest in Europe (Table 1).

Table 1. Smoking by age group, Armenia[7]

Age	Men (%)	Women (%)
15-19	20	0,6
20-24	71,9	1,5
25-29	74,8	2,6
30-34	80,4	3,9
35-39	80,7	2,4
40-44	80,1	5,5
45-49	70,6	6,1
50-54	69.9	--
Total (15-54)	**67,5**	**3,1**

Though the prevalence of smoking in women is low (3,1% compared with 23% of the European region), experts say that for some reasons this number is not reliable. Further, according to the same source, it is increasing. Unfortunately, no appropriate research and surveys have been conducted in Armenia for filling the significant gap of information until very recently.

In 2001, the smoking prevalence in young people in Europe was 27-30% with a slight upward trend[8]. There are no official data on the youth smoking in Armenia. However, in 2004 a global youth survey on tobacco use was conducted in Armenia, and the results of this survey will be summarized soon.

3. Medical and Public Health Issues Related to Tobacco Use

It is known that the majority of tobacco users start smoking at an early age, when they cannot fully evaluate the consequences of smoking. But smoking is not just a habit into which you fall at an early age.

The addictive nature of tobacco has been well known for ages. For that reason, one of the Russian Czars enacted severe punishment for tobacco use.

Tobacco use became wide spread during the 20th century, but during the last decades the attitude towards tobacco has changed, and the smoker's appeal has lost its charm. How and why this happened is discussed below.

The answers provided by the science of medicine were as following: smoking has lethal consequences, it is addictive, and finally, tobacco smoke damages non-smokers' health.

Tobacco's impact on people is diverse and is conditioned by several factors. Tobacco contains nicotine, which is accepted as an addictive product by international health institutions. Nicotine corresponds to the criteria of an addictive substance. Moreover, nicotine addiction is classified as a mental and behavior disorder caused by tobacco use in the WHO's "International Classification of Diseases" (F 17; ICD 10)[9] and in the "Diagnostic and Statistical Manual of Mental Disorders" of the American Psychiatric Association (DSM-4). According to recent studies, nicotine addiction is comparable with the addiction caused by drugs such as heroin.

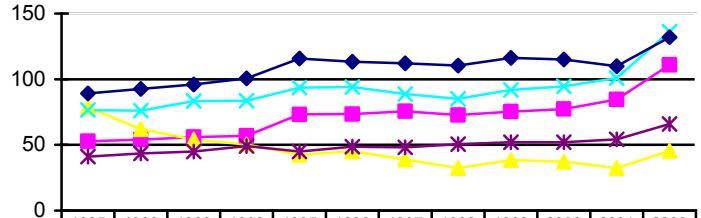
However, it is not because of the nicotine that a probability of cancer is higher among tobacco users. Rather, the tar of tobacco contains thousands of chemical particles from which nearly 40 are carcinogenic. At the same time, tobacco smoke contains carbon monoxide, the so called "charcoal poisoning gas", which limits the ability of blood to supply oxygen to the tissues and is responsible for the increase of cardiovascular diseases both among smokers and "passive" smokers.

Thirty percent of morbidity from cancer diseases (90% of lung cancer), 25% of morbidity from ischemic heart disease and stroke, and 75% of morbidity from chronic respiratory diseases (including lung emphysema and bronchitis)[10] are caused by tobacco use. Approximately 60000 scientific studies have been conducted throughout the world that have identified the correlation between smoking and cancer (lung cancer, oral cavity cancer, etc); smoking and cardiovascular diseases, smoking and fetal development, as well smoking and some other diseases.

Mortality from tobacco-related diseases is conditioned by the high prevalence of smoking among men in Armenia. It is evident that the mortality rate of men from the diseases caused by tobacco use is several times higher than that of women. For example, according to data from the National Statistical Service, among patients diagnosed in 2002 with lung cancer, 808 were men while only 136 were women[12]. However, it should be mentioned that there is an increasing trend[13] in women's tobacco-related mortality rates.

Mortality rates from some chronic diseases for which tobacco use is the main risk factor are presented below *(Table 2)*.

Table 2. Mortality rate from chronic diseases (Armenia, 1985-2002)



	1985	1988	1989	1990	1995	1996	1997	1998	1999	2000	2001	2002
Hypertension	52,8	54,06	56,01	56,81	73,08	73,45	75,64	72,6	75,4	77,23	84,58	110,9
Respiratory causes	78,79	62,02	53,97	50,3	42,55	45,12	38,88	32,22	38,36	37,23	32,31	45,52
Cerebrovascular diseases	76,69	76,1	83,43	83,59	93,48	94,15	88,75	85,17	92,01	94,66	100,9	136,1
CHD	178,2	185,3	192,2	201,1	231,3	226,4	224,3	220,5	232,5	230	219,9	264,2
All cancers	82,14	87,16	90,13	98,28	90	97,07	96,51	100,9	104,3	104,1	108,6	131,8

Source: Ministry of Health, RA

The research carried out by renowned public health experts Allan Lopez, Richard Peto and others describes the statistical picture of tobacco use consequences, and makes comparisons among the countries of Europe and other regions. Below are the research results *(Table 3):*

Table 3. Comparative tobacco-related mortality rates in various countries

Albania	12.2%	Kyrgyzstan	10.7%
Armenia	*22.0%*	Latvia	18.4%
Austria	9.1%	Lithuania	16.3%
Azerbaijan	9.2%	Macedonia	13.3%
Belarus	21.2%	Moldova	23.4%
Belgium -Luxemburg	10.6%	Netherlands	10.6%
Bosnia and Herzegovina	17.1%	Norway	5.7%
Bulgaria	15.8%	Poland	21.3%
Croatia	13.9%	Portugal	6.3%
Cyprus	8.1%	Romania	19.5%
Czech Republic	14.3%	Russia	21.3%
Denmark	9.5%	Slovakia	16.0%
Estonia	19.0%	Slovenia	17.7%
Finland	6.8%	Spain	11.3%
France	11.8%	Sweden	3.5%

Georgia	16.0%	Switzerland	7.7%
Germany	11.7%	Tajikistan	8.4%
Greece	9.1%	Turkey	15.8%
Hungary	23.0%	Turkmenistan	10.8%
Ireland	8.5%	Ukraine	19.9%
Israel	9.4%	United Kingdom	7.3%
Italy	9.9%	Uzbekistan	9.5%
Kazakhstan	19.1%		

Source: Mortality caused by smoking in developed countries. 1950-2000. Peto R., Lopez A., et al.

It can be seen that Armenia occupies third place, after Moldova and Hungary, by the tobacco-related mortality. The average number of years lost due to tobacco use per smoker is 17 years *(Table 4)*.

Table 4. Average number of years lost as a consequence of tobacco use, Armenia

Age Groups	*Lost Years*
0-34	0
35-69	21 years
70+	10 years
Total	17 years

Source: Mortality from smoking in developed countries. 1950-2000. Peto R., Lopez A., et al.

A quantum leap of logic is not needed to understand the significance of these figures and the impact of smoking on the family, the public at large and the state as well.

4. WHO Framework Convention on Tobacco Control

The Framework Convention on Tobacco Control (FCTC) was developed by the World Health Organization in response to the tobacco use epidemic's globalization. Taking into account the morbidity, mortality and economic losses caused by tobacco use the World Health Assembly, as the governing body of the World Health Organization, on behalf of 191 countries, made a unanimous decision to develop a Framework Convention on Tobacco Control on May 24, 1999. An intergovernmental negotiations body was created with participation of all WHO member countries, which scheduled 6 sessions through 2003 for elaboration of a framework convention document. As a result, the final text of a treaty was negotiated and presented for the approval of the 56th World Health Assembly.

The Republic of Armenia took part in all 6 of these sessions. The mission of the Republic of Armenia included representatives from the Ministry of Foreign

Affaires, Ministry of Health, and the Chair of the Standing Committee on Social Affairs, Health Care and Environment of the National Assembly.

The Framework Convention was approved during the 56th Session of the World Health Assembly on May 21, 2003, and signed by 168 countries. On October 12, 2004 the National Assembly of the Republic of Armenia, at the suggestion of the President of the Republic of Armenia, ratified the Framework Convention.

The main goal of the convention is to protect present and future generations from the consequences of tobacco use and exposure to tobacco smoke on human health as well as from the social, environmental and economic consequences.

Taking into account a growing trend of tobacco use in the country, which can lead to the serious epidemiological shift, such as increased morbidity and mortality rates, a further decrease in quality of life and life expectancy, it is necessary to create a legislative basis consistent with the Framework Convention which will become a benchmark for regular and systematic intersectoral activities.

What is tobacco control? Is there an international definition of tobacco control activities? The Framework Convention defines *tobacco control* as *"a range of supply, demand and harm reduction strategies that aim to improve the health of population by eliminating or reducing their consumption of tobacco products and exposure to tobacco smoke".*

International experience

Those countries that years ago enforced appropriate measures to control the tobacco epidemic, now can enjoy their results, such as an improvement of quality of life, saved lives and economic benefits.

The list of these countries is large. It includes USA, Canada, the United Kingdom, Norway, Sweden, Poland, Hungary, Australia, New Zealand, South Africa, and Thailand. As well, many other countries have initiated serious steps in that direction including China, Cuba, Japan, and India.

Approaches

- Each person has the right to be informed of health consequences, addictive nature and mortal threat posed by tobacco use and exposure to tobacco smoke;
- It is necessary to create legislative, executive, administrative and/or other measures in the appropriate governmental levels to protect people from tobacco smoke;
- It is necessary to commence appropriate measures to prevent tobacco use initiation, to encourage giving up smoking and to reduce the use of all types of tobacco;
- To provide information to the population about the content (toxic constituents) of tobacco products;
- To implement efficient measures to ensure the execution of laws.

5. Measures Relating To The Reduction of Demand For Tobacco

5.1. Non-price measures to reduce the demand for tobacco

5.1.1. Protection from exposure to tobacco smoke

Tobacco use harms not only the smoker, but also the people around the smoker who are exposed to the affects of tobacco smoke (we are talking about "passive" smoking or the impact of "secondary" tobacco smoke).

What do we mean when we say "secondary" tobacco smoke? It is the mixture of smoke originated after burning the cigarette and the smoke exhaled by the smoker. In other words, it is called Environmental Tobacco Smoke (ETS). "Secondary" tobacco smoke is a complex mixture of thousands of chemical elements (approximately 4000). There are at least 40 cancerogenic ingredients in tobacco smoke *(Table 5)*.

Table 5. Some chemical materials that can be found in "secondary" tobacco smoke

Chemicals	*Unit*	*Chemicals*	*Unit*
Carbon monoxide	5606	Benzopyrene*	18
Nicotine	678	Rezoly	15
Rosin	3128	Propionaldehyde	17
Acetaldehyde*	207	Hydrogen cyanide	14
Azote oxide	190	Styrene	13
Isoprene	151	Butyraldehyde	12
Lesorcinol	123	Acrylonitrile*	11
Acetone	121	Crotonaldehyde*	10
Toluol	66	Cadmium*	9.7
Formaldehyde*	54	1-Amynonaphthalyne	8.5
Nenol	44	Chrome*	7.1
Acrolein	40	Plumbum*	6.0
Benzol*	36	1-Aminonaphthalyne*	5.2
Pyridine	33	Nickel*	4.2
1,3-Buthadien*	25	3-Aminobyphenyl	2.4
Hydroquinone	24	4-Aminobyphenyl*	1.4
Methyl Ethyl Cetone	23	Hinoline*	1.3
Cathecol	22		

* *Cancerogenic*

Besides the negative impact on the central nervous system, nicotine contained in smoke has an affect on the peripheral nervous system that causes numerous undesirable changes, including vascular spasms and arterial hypertension.

Finally, tobacco smoke contains a lot of carbon monoxide (so called "charcoal fumes"), which reduces the blood's ability to provide oxygen to the tissues of the body (including myocardium and cerebrum). Smoke includes other components that may lead to the aggregation of thrombocytes and promotes diseases of heart, in particular myocardial infarction.

"Passive" smoking differs from common smoking by being involuntary. Adults absorbing the environmental smoke face an additional risk of lung cancer (20%) and cardiovascular diseases (23%).

A comprehensive study (32,000 participants) carried out in the USA in the 1990s showed that the frequency of myocardial infarction is twice as high for those under the regular impact of ETS than those who avoided tobacco smoke. So, "passive" smoking causes not only headache, cough, retina irritation etc, but it may become a risk factor for much more serious diseases.

The ETS has a significant impact on children as well. The children, who are regularly exposed to tobacco smoke, have more health problems. They suffer from bronchitis, respiratory diseases and irritation of the middle ear more often than those children not exposed to tobacco smoke. According to statistics, children exposed to ETS need medical care more often. The probability of bronchial asthma increases among them. And in the case of patients with bronchial asthma (both children and adults), ETS can complicate the disease and cause asthmatic spasms.

So, evidence on the involuntary exposure to "secondary" tobacco smoke and its consequences highlights the necessity of protecting non-smokers' rights, and the development and enforcement of appropriate laws.

Situation in Armenia

In Armenia there are no legislative limitations on tobacco use in public and work places. Some limitations existing in private institutions are the personal initiatives of the directors and not a state-mandated prohibition. The result of a household survey conducted in two regions (marzes) of Armenia (Gegharkunik and Armavir) has shown that nearly 60% of the population (including children) is always or often exposed to tobacco smoke.

International experience

In some countries the problem of protecting non-smokers' rights in public and work places is regulated by the state, thereby minimizing the risk of "passive" smoking and ensuring a smoke-free environment. These kinds of provisions not only protect the rights of non-smokers and promote their improved health, but they also foster modern attitudes towards smoking, thereby making it unacceptable for the public. The situation in Armenia and in other countries is presented in the tables below.

Table 6a. Limitations of tobacco use in public places in various countries[15]

The place where tobacco use is regulated by law							
Country	**Health Institutions**	**Training Institutions**	**Governing Institutions**	**Restaurants**	**Bars, Pubs**	**Workplace and Office**	**Theatre and Cinema**
Armenia[1]	*No limits*	*No limits*	*No limits*	*No limits*	*No limits*	*No limits*	*No limits*
Georgia	Partly limited	Partly limited	Partly limited	Partly limited	Partly limited	Partly limited	Partly limited
Azerbaijan	Full prohibition	Full prohibition	Full prohibition	Partly limited	Partly limited	Full prohibition	Full prohibition
Bulgaria	Full prohibition	Full prohibition	Full prohibition	Partly limited	Partly limited	Full prohibition	Full prohibition
Estonia	Full prohibition	Full prohibition	Full prohibition	Partly limited	Partly limited	Full prohibition	Full prohibition
Finland	Full prohibition	Full prohibition	Full prohibition	Partly limited	Partly limited	Full prohibition	Full prohibition
France	Full prohibition	Full prohibition	Full prohibition	Partly limited	Partly limited	Full prohibition	Full prohibition
Israel	Full prohibition	Full prohibition	Full prohibition	Partly limited	Partly limited	Full prohibition	Partly limited
Italy	Full prohibition	Full prohibition	Full prohibition	Partly limited	Partly limited	Full prohibition	Full prohibition
Kazakhstan	Full prohibition	Full prohibition	Full prohibition	Partly limited	Partly limited	Full prohibition	Full prohibition
Norway	Full prohibition	Full prohibition	Full prohibition	Full prohibition	Full prohibition	Full prohibition	Full prohibition
Poland	Full prohibition	Full prohibition	Full prohibition	Partly limited	Partly limited	Full prohibition	Full prohibition
Republic of Moldova	Full prohibition	Full prohibition	Partly limited	No limits	No limits	Partly limited	Partly limited
Russian Federation	Full prohibition	Full prohibition	Full prohibition	No limits	No limits	Full prohibition	Full prohibition
Serbia and Montenegro	Full prohibition	Full prohibition	Partly limited	Partly limited	No limits	Partly limited	Full prohibition
Tajikistan	No limits	No limits	No limits	No limits	No limits	No limits	No limits
Turkey	Full prohibition	Full prohibition	No limits	No limits	No limits	Partly limited	Full prohibition
Ukraine	Full prohibition	Full prohibition	Full prohibition	No limits	No limits	No limits	Full prohibition

[1] According to the "Law of RA On Tobacco Sales, Consumption and Usage Limitations" adopted on December 24, 2004, smoking is fully prohibited in health, educational and cultural institutions and partially prohibited in all other workplaces, except restaurants and bars.

Table 6b. Tobacco use limitations in transports in various countries.

Country	Bus	Taxi	Train	International air transport
Armenia[2]	No limits	No limits	No limits	No limits
Georgia	Full prohibition	Full prohibition	Full prohibition	Full prohibition
Azerbaijan	Full prohibition	Full prohibition	Full prohibition	Full prohibition
Bulgaria	Full prohibition	Full prohibition	Full prohibition	Full prohibition
Estonia	Full prohibition	Full prohibition	Full prohibition	Full prohibition
Finland	Full prohibition	Full prohibition	Partly limited	Voluntary agreement
France	Partly limited	No limits	Partly limited	Partly limited
Israel	Partly limited	Partly limited	Partly limited	Full prohibition
Italy	Full prohibition	Voluntary agreement	Partly limited	Voluntary agreement
Kazakhstan	Partly limited	Partly limited	Full prohibition	Full prohibition
Norway	Full prohibition	Full prohibition	Partly limited	Voluntary agreement
Poland	Full prohibition	Full prohibition	Partly limited	Full prohibition
Republic of Moldova	Full prohibition	Full prohibition	Partly limited	Full prohibition
Russian Federation	Full prohibition	No limits	Partly limited	Partly limited
Serbia and Montenegro	Full prohibition	No limits	Partly limited	Partly limited
Tajikistan	Full prohibition	Full prohibition	Full prohibition	Full prohibition
Turkey	Partly limited	No limits	Partly limited	No limits

Comparing the situation in the aforementioned countries, we see that Armenia is in the group of the countries that has not accepted the legislative limitations on smoking in public (theatre, cinema, etc.) and work places.

[2] According to the "Law of RA On Tobacco Sales, Consumption and Usage Limitations" adopted on December 24, 2004, smoking is fully prohibited in buses and taxi and partially prohibited in trains and airports.

Approaches

Actively support the acceptance and implementation of legislative, executive, administrative and other effective methods and measures insuring protection from tobacco smoke's impact in the following places:

- Workplace (health, educational, governmental and other institutions);
- Inside buildings;
- Public transports (urban, interurban, international, air);
- Closed public places (theatres and cinemas);
- Other public places (restaurants, bars, taverns).

5.1.2. Prohibition of tobacco advertising as a measure to reduce tobacco consumption

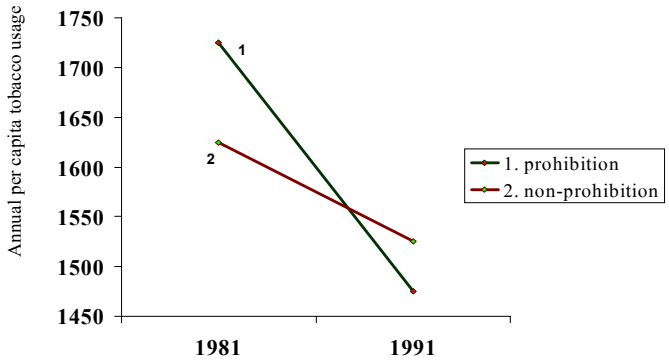
In order to reduce tobacco use it is very important to understand what incentive factors of smoking there are and what motivations should be used to attain the maximum result. Along with the price policy, the advertising factor is very important. When talking about tobacco advertising, sales promotions and sponsoring, the meanings of the mentioned terms should first be defined. There are international definitions that apply here.

Tobacco sales advertising and promotion: Commercial information, consultancy or any other type of activities, the goal of which is tobacco sale or direct or indirect promotion of tobacco usage.

Sponsoring: Any support to an event, provision or any person for the direct or indirect promotion of tobacco sales and usage effectively or with potential efficiency.

Advertisement has a great impact on smoking and especially on the prevalence of smoking among young people. All those arguments that advertisement does not attract new smokers and just encourages the current smokers to follow the same brand of tobacco or the same producer are

Diagram 1. Impact of advertisement prohibition



unconvincing. This has been proven both by economic and non-economic scientific studies.

The studies conducted in 102 countries among people between the ages of 16 and 64 show that when all tobacco advertising was prohibited, the level of tobacco use (person/year) was much lower as when compared with countries with no limitations *(Diagram 1)*.

Simultaneously, experience shows that the most effective method is full prohibition of tobacco advertising and sponsoring. Partial prohibition of advertisement, either sponsoring or some type of advertising, is much less effective. So, according to the experts, efforts should be made to reach full prohibition of advertising. Please note, however, that no additional expenses are required from the state for the overall prohibition of tobacco advertising.

Situation in Armenia

It is evident that there are no tobacco advertisement limitations in Armenia. In our country only advertisements on TV and radio are prohibited, but this prohibition is violated or ignored because of the limited enforcement of the current law. Further, there are no limitations on advertising tobacco on billboards. Tobacco use has penetrated into cultural places, and is advertised and demonstrated to the audience before the film performance, even during the day. As well, there are no limitations for sponsoring TV programs by tobacco producers, which is a hidden form of tobacco advertising. Sponsoring and free tasting of tobacco is carried out even among the under-aged.

A small survey of 84 persons (24.5year old on average) in 2004 showed that:

- 69% believed that there are no acting limitations on tobacco advertising on Armenian TV and radio;
- 87% supported the prohibition of smoking in public and work places, as performed in other countries;
- 84% believed that such laws are necessary in Armenia;
- 27% answered “yes” to the question, whether any representatives of tobacco producing companies had ever offered free cigarettes for tasting;
- 79% believed that use of Armenian national emblems while advertising tobacco is morally unacceptable.

This survey, indeed, does not present the opinion of the overall youth for understandable reasons, but it is evident that limitations on tobacco advertising are a necessity. The uncontrolled tobacco advertising and production of different types of tobacco has become one of the main reasons of the tobacco epidemic in Armenia.

Limitations, and ultimately prohibition, on tobacco advertising by law will enable the “non-smoking” movement to become more acceptable and wide spread among the public, and especially among the youth. The evidence shows that prohibition of direct and indirect advertising of all types of cigarettes in the mass media reduces the attractiveness of tobacco use, especially among the youth.

International experience

Countries enacting limitations on tobacco advertising have felt the results of those provisions.

- In 1975 all tobacco advertising was prohibited in Norway, and tobacco use decreased by 9%;
- In 1977 all tobacco advertising was prohibited in Finland, and tobacco use decreased by 6,7 %;
- In 1990 all tobacco advertising was prohibited in New Zealand, and tobacco use decreased by 5,5 %;
- In 1994 all tobacco advertising on electronic and mass media was prohibited in China.

The situation in some countries of Europe, the CIS, the Baltic States and neighboring countries is presented below.

Table 7. Direct advertisement of tobacco[15]

Country	***National TV***	***Cable TV***	***National Radio***	***National printed press***	***International printed press***	***Advertising boards***	***Sale points***	***Cinemas***
Azerbaijan	Full prohibition	Full prohibition	Full prohibition	Full prohibition	No limits	Full prohibition	Full prohibition	Full prohibition
Armenia	*Prohibition*	*Prohibition*	*Prohibition*	*No limits*	*No limits*	*No limits*	*No limits*	*No limits*
Bulgaria	Full prohibition	Full prohibition	Full prohibition	Full prohibition	No limits	Full prohibition	Partly limitation	Full prohibition
Estonia	Full prohibition	No limits	Full prohibition	Full prohibition	No limits	Full prohibition	Full prohibition	Full prohibition
Finland	Full prohibition	Full prohibition	Full prohibition	Full prohibition	No limits	Full prohibition	Full prohibition	Full prohibition
France	Full prohibition	Full prohibition	Full prohibition	Full prohibition	Full prohibition	Full prohibition	Partly limited	Full prohibition
Georgia	Full prohibition	Full prohibition	Full prohibition	Partly limited	No limits	Partly limited	Partly limited	Partly limited
Ireland	Full prohibition	Full prohibition	Full prohibition	Full prohibition	No limits	Full prohibition	Partly limited	Full prohibition
Israel	Full prohibition	Full prohibition	Full prohibition	Partly limited	No limits	Full prohibition	Partly limited	Full prohibition
Italy	Full prohibition	Full prohibition	Full prohibition	Full prohibition	No limits	Full prohibition	Full prohibition	Full prohibition
Kazakhstan	Full prohibition	Full prohibition	Full prohibition	Partly limited	No limits	Full prohibition	No limits	Full prohibition
Norway	Full prohibition	Partly limited	Full prohibition	Full prohibition	Partly limited	Full prohibition	Full prohibition	Full prohibition
Poland	Full prohibition	Full prohibition	Full prohibition	Full prohibition	Full prohibition	Full prohibition	Partly limited	Full prohibition
Moldova	Full prohibition	No limits	Full prohibition	Partly limited	No limits	Full prohibition	No limits	Partly limited
Slovakia	Full prohibition	Full prohibition	Full prohibition	Full prohibition	No limits	Full prohibition	Full prohibition	Full prohibition
Slovenia	Full prohibition	Full prohibition	Full prohibition	Full prohibition	No limits	Partly limited	No limits	Partly limited
Spain	Full prohibition	Full prohibition	Full prohibition	No limits	No limits	No limits	No limits	No limits

Sweden	Full prohibition	Full prohibition	Full prohibition	Full prohibition	No limits	Partly limited	Partly limited	Full prohibition
Turkey	Full prohibition	Full prohibition	Full prohibition	Full prohibition	No limits	Full prohibition	Partly limited	Full prohibition
Turkmenistan	Full prohibition	Full prohibition	Full prohibition	Full prohibition	Full prohibition	Full prohibition	Full prohibition	Full prohibition
Great Britain	Full prohibition	Full prohibition	Full prohibition	Full prohibition	Partly limited	Full prohibition	Voluntary agreement	Full prohibition
Uzbekistan	Full prohibition	No limits	Full prohibition	Partly limited	No limits	Full prohibition	No limits	No limits

Approaches

- Prohibit any type of direct or indirect advertising of tobacco products and smoking, including tobacco sales promotions, tobacco brand use for goods not related to the tobacco, as well as sponsoring;
- Limit the use of any direct or indirect incentives encouraging procurement of tobacco products.

5.1.3. Tobacco packaging and labeling, and the regulation of tobacco product' content disclosure.

The reduction of the cancerogenic and toxic components contained in tobacco smoke requires clear evaluation and strict regulation of the materials absorbed by the body. Further, it is necessary to give consumers a clear idea about the real risks they are exposed to through visible, objective and convincing warnings. Even in those countries where consumers are well aware of the negative impacts of tobacco on their health, the data shows that the wide spread incomplete notions about those negative impacts are highly conditioned by tobacco packages and labels. Though science has proven that there are no light cigarettes, the majority of smokers have a poor understanding about tobacco smoke. Starting in the 1960s, tobacco-producing countries were obligated to put precautions[16] on packages of their products. In 1991 such precautions were printed in 77 countries (including the USSR before the collapse). But very few countries accepted the necessity of such strict precautions such as "Tobacco causes lung cancer". These kinds of precautions are the most effective and expedient.

Situation in Armenia

Currently the packs of tobacco sold in Armenia not only have an attractive design, but sometimes they have national emblems on them. Medical precautions occupy only 4% of the wide side of the pack and reflect the following note: "Smoking harms the health". This message does not express the real health risk, is not attention-grabbing and does not have serious influence on people. Very often it is not readable because of the "special" selection of the font, color and size of the letters.[3]

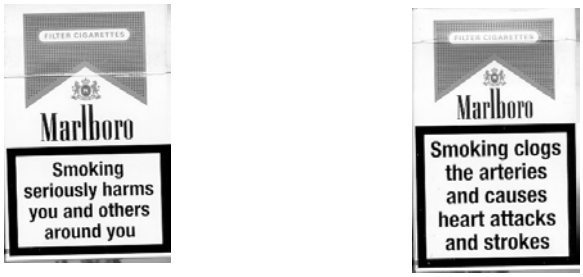
[3] According to the "Law of RA On Tobacco Sales, Consumption and Usage Limitations" adopted on December 24, 2004, the area for the health warning will be increased to at least 30% by February 1, 2008.

International experience

Terms such as "light", "ultra light", "with low content of nicotine" etc., are prohibited on tobacco products produced in the European Union *(see Picture 1)*. As well, according to the latest requirements, the precaution typed on tobacco products sold in the European Union must occupy not less that 30 percent of the wide side of the tobacco pack and include the following notes:

- *Smokers die younger;*
- *Smoking clogs the arteries and causes heart attacks and strokes;*
- *Smoking causes fatal lung cancer;*
- *Smoking during pregnancy hurts your baby;*
- *Protect your children! Do not allow them to inhale the smoke;*
- *Your doctor or pharmacist will help you to give up smoking;*
- *Smoking is addictive, do not start;*
- *Giving up smoking reduces the risk of fatal heart and lung diseases;*
- *Smoking may cause slow and painful dying;*
- *Ask for help to give up smoking (phone number/post code/Internet site)/consult with your doctor/pharmacist);*
- *Smoking can affect blood vessels and cause impotence;*
- *Smoking makes your skin old-looking;*
- *Smoking may harm the sperm and lead to a fertility reduction;*
- *Smoke contains benzyl, nitrosamines, formaldehyde and hydrogen cyanide.*

Picture 1. The appearance of a tobacco pack in the European Union



In Canada, beside the medical precautions, the package design must include pictures explaining the meaning of the medical precaution. Pictorial medical warnings should occupy 50% of the pack's display area.

Some medical notes are presented below:

- *Tobacco causes lung cancer. Cancer kills 8 of 10 victims.*
- *Tobacco causes mouth cavity diseases.*
- *Tobacco uses causes mouth cavity cancer.*
- *The probability of getting addicted to cigarettes is very high.*
- *According to studies, it is more difficult to give up smoking than to stop usage of heroin and cocaine.*

Picture 2. The appearance of a tobacco pack in Canada

- *Meaningless, but mortal. The smoke of a burning cigarette contains a number of poisoning components including hydrogen cyanide, formaldehyde and benzol.*
- *Secondary smoke can cause death from lung cancer and other diseases.*
- *Protect your children's health.*
- *Secondary smoke at home or in the car has harmful influence on the child causing asthma, ear irritation, bronchitis and cough.*
- *Each year more than 100 children die from "sudden infant death syndrome" (SIDS) caused by tobacco smoke.*

Currently the precautions used in Canada are considered as exemplary for their design.

Approaches

- Each piece, box or package of tobacco should contain a medical precaution (in the future it must occupy 50% or more of the overall labeled area, and in no case less than 30%)[17], as well as pictures and symbols that express the negative health consequences of smoking;
- Insure that those precautions include clear and exact information about the poisonous chemicals, in particular rosin, nicotine, carbon monoxide etc, contained in the tobacco, including the actual measured proportions of those chemicals in the tobacco smoke;
- Prohibit the use of "low tar", "light", "ultra light", "mild" or any other confusing terms that directly or indirectly can create a false impression that a particular tobacco poduct is less harmful than other tobacco products. Measures should be taken to ensure that any outside packaging and labelling do not promote false and misleading impressions about tobacco products.

5.1.4. Tobacco sale limitations

It is known that 80% of smokers start smoking before becoming adults. Possibly this figure is a bit lower in Armenia, as here girls start smoking later than the girls in Europe, North America and Russia. But this fact doesn't change the nature of the problem. The under-aged cannot adequately evaluate the information concerning the harmful and perilous impacts of smoking on health. The prohibition

of selling tobacco to the under aged is not enough. It creates an opinion among children that "tobacco is for adults", thereby making it more attractive for them. However, introduction of age limits will be one component of complex provisions directed at the reduction of tobacco accessibility and affordability among the youth. International experience shows that it is very difficult to conform to the age limits for tobacco sales if they are not paralleled with strict regulations on the sellers' work (for example by licensing or accreditation) and banning tobacco sale and delivery without the direct participation of the seller.

Approaches

- Prohibit tobacco sale in smaller packs or by item;
- Prohibit free distribution of all kinds of tobacco;
- Prohibit tobacco sale through vending machines or through mail or electronic order (the last is not yet occurred in our country, but it can appear any time if appropriate measures are not initiated)[17];
- Require a sign about the prohibition of tobacco sales to under-aged persons in a visible place next to the sales place; and in case of any doubt the seller may require proof of age as required by law;
- Define and use effective methods for wholesale and retail sellers to ensure the implementation of the above-mentioned limitations.

5.2. Price and tax measures to reduce the demand for tobacco

5.2.1. Tobacco taxes in Armenia

The taxes for local consumption and importing of tobacco in Armenia have been changed very little since 1999. The accredited importing payments decreased by 26.6% in 2002, in comparison with 1999. In the tables below, the approved payments for tobacco *(Table 8)* and actual state profits received from local production and importing of tobacco *(Table 9)* are presented, based on data from the Ministry of Finance and Economy.

Table 8. The approved payments for tobacco produced in, and imported to, the Republic of Armenia (per 1000 pieces), 1999-2002

Starting from August 1, 1999		
	Produced	Imported
Filtered	5500 dram	15$
Without filter	1100 dram	6$
Starting from April 1, 2000		
Filtered	8$	10$
Without filter	2,2$	3$
Starting from January 1, 2002		
Filtered	8$	11$
Without filter	3,5$	6$

Table 9. State budget profits received from tobacco products produced in, and imported to, the Republic of Armenia (thousand AM drams)

	Y2001	Y2002	Y2003
Tobacco import	10 857 928	10 673 666	11 860 320
Tobacco production	2 843 541	8 725 993	11 203 620

The profits received from the approved payments for tobacco products are quite high and are increasing due to the growth of tobacco consumption. The health expenses for the treatment of diseases caused by tobacco use covered by the state are increasing as well *(see Table 13)*.

International experience

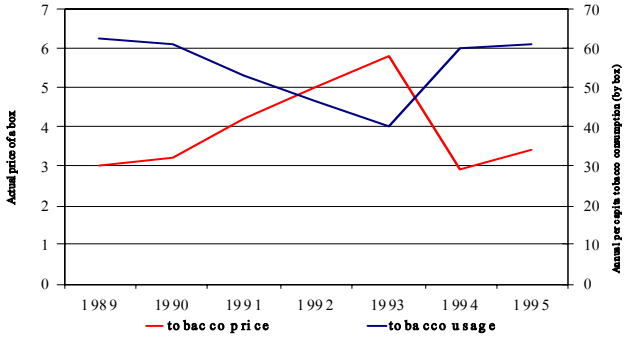
Studies show that increasing taxes is more effective and efficient, especially for the developing countries. The necessity of increasing taxes is explained and justified from different points of view.[16]

- A tax increase immediately leads to an abrupt reduction of tobacco consumption: the price increases, the consumption decreases. Experience shows that when increasing taxes by 10%, tobacco use drops by 5-8%;
- Tobacco use reduction caused by a price increase is mainly felt by adults and young people with low income (i.e. prevents smoking among the youth);
- A tax increase insures the receipt of state profits requiring very small administrative expenses;
- Some part of the taxes collected from tobacco, in some countries, is allocated to improving the public's health; to increasing the public's awareness and to the projects promoting healthy lifestyles.

For example, in California (USA), 45% of all additional taxes (or 0.25 cents from each tobacco box) is allocated for medical care, 5% is earmarked for research of the issues related to tobacco use, and 25% is directed towards anti-tobacco activities. In Michigan (USA), tobacco tax comprises 48% of the overall tobacco price and here if the price of tobacco increases, the tax also increases.

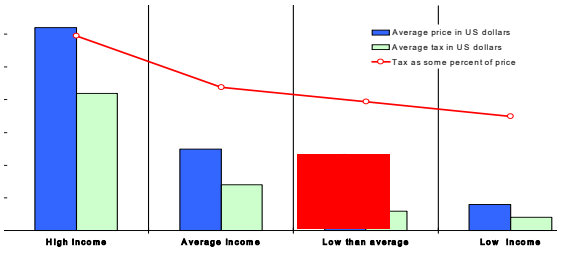
The diagram presented below *(Diagram 2)* reflects the correlation between tobacco price and tobacco consumption. The research was carried out from 1989-1995 in Canada.

Diagram 2. Correlation between tobacco price and consumption



Different countries have different approaches to tobacco taxes. In high-income countries, the tax amount is more than half of the retail price of a tobacco box (approximately two-third of the retail price). But in low-income countries, the tax is at the very most one-half of the retail price[16] *(Diagram 3)*. Please note that Armenia is classified as a country with less than average income.

Diagram 3. Average price of tobacco, tax and tax percent in the price of a pack



Source: WB income groups, 1996

Attention should be paid to the fact that in Armenia, the prices of some foodstuffs, including bread and bakery items, have increased, but the price of tobacco has not changed. For example, compared with January 2002, the price of bakery items rose 131,3% in 2003, and the price of macaroni rose 150%. The price of meat has increased by 9,5 % in comparison with December 2002. According to the data of National Statistical Service of the Republic of Armenia, the prices of tobacco and alcohol, in general, increased by 2.7% between October and December 2003, while tobacco prices have not changed, and the prices of alcohol in general has increased by 19. 8%:

Approaches

- Establishment of high prices and taxes for tobacco is one of the most effective components of a national policy for dealing with the complex tobacco control procedures. The increase of actual prices of tobacco at the expense of an increase in tobacco tax leads to a reduction in tobacco dissemination while simultaneously increasing state income.
- The increase in tobacco prices must exceed, or at least correspond to, the rise in prices and income, which will make tobacco less affordable.
- Allocation of some part of the revenue received from tobacco taxes for financing national projects on tobacco control and other health projects.
- Consistency in the prices and taxes of tobacco products (cigarettes, cigars, cigarillos).

6. Measures Relating To The Reduction of Supply of Tobacco

6.1. Support for cost-effective alternatives

Situation in Armenia

According to official data, total arable land in Armenia is 494,3 thousand hectares, of which cultivated land was 305,7 hectares in 2002, and of that, tobacco was 890 hectares, i.e. 0,29%.

Though tobacco farming is a source of income for many farmers, in comparison with the other crops it entails much higher expenses. Tobacco destroys the nourishing materials contained in the land faster than other plants. Tobacco farming requires the use of chemicals such as herbicides, nematocides, fungicides, and insecticides. Besides causing serious ecological problems, these chemicals can cause skin cancer and various respiratory diseases. Also, tobacco farming may cause the so-called "green leaf" disease, which is caused when nicotine is absorbed by the skin.

International experience

To help reduce tobacco use, some countries employ a policy of exchanging tobacco cultivation with other plants. Canada has had the most success of any country with this plan.

The Department of Agriculture of Canada has implemented two such projects. The first project encouraged the transition from tobacco production to other products, and the second supported the farmers in that exchange. The projects were quite expensive: the first was estimated at 69,5 million Canadian dollars, and the second one - 15 million Canadian dollars. The project of exchanging tobacco planting with other plants was more cost-effective. In 1992 the number of tobacco-producing farms was reduced by 55%, in comparison with 1981.[16]

Canada's experience cannot be completely replicated in other countries. But careful study of it can lead to the selection of cost-effective options.

6.2. Illegal trade and smuggling of tobacco

Tobacco smuggling is a significant issue for many countries. Given the data from studies conducted in 2001, only two-third of exported tobacco ends up as a legally imported product. The remaining third is, by most estimates, smuggled into its destination.

The illegal import of tobacco has negative impacts on the health of the population, and leads to an increase in tobacco use. It is equally important to note that the government suffers significant economic losses, in the form of uncollected taxes from smuggled tobacco.

There is an opinion that smuggling may be the consequence of very high tobacco taxes in the producing country, or very low prices in destination countries. But studies show that smuggling is widespread, particularly in countries with a high level of corruption. For example, in Sweden, tobacco prices are high but the level of smuggling is quite low. Also, it is very important to initiate appropriate administrative procedures and to define strict controls on imports in parallel with tobacco price increases.

The table below presents data on the percentage of tobacco smuggling in some European countries, and the economic losses to the state caused by the non-collection of excise taxes from the smuggled tobacco.

Table 10. The annual income loss of the state caused by tobacco smuggling in some European countries.

Country	*Tobacco smuggling, 2000 (%)*	*Annual loss of income mln. Euro*
United Kingdom	22-25	6.000
Italy	20	1.730
Germany	8-12	1.400
Spain	5	250
Netherlands	7	140
Belgium	3-7	70
France	2	170
Sweden	4-5	45
Ireland	15	160

International experience

One of the few countries enjoying success in the reduction of smuggling is Spain. One of the transit routes for smuggling tobacco to Spain was Andorra. In 1997 the authorities of Andorra, England, France and Spain were able to reduce tobacco smuggling through Andorra due to their mutual efforts and close collaboration.

The secret of their success was that efforts were made not to control the illegal sale of tobacco in the streets, but to prevent tobacco smuggling in the first place. Due to these actions, the state's annual income for 1998 increased by 25%, thanks to a rise in tobacco tax revenue.[16]

Today smuggling is a major international problem. This is an issue of concern for many governments, the WHO, the World Trade Organization, the International Monetary Fund, the International Police Organization, etc.

Approaches

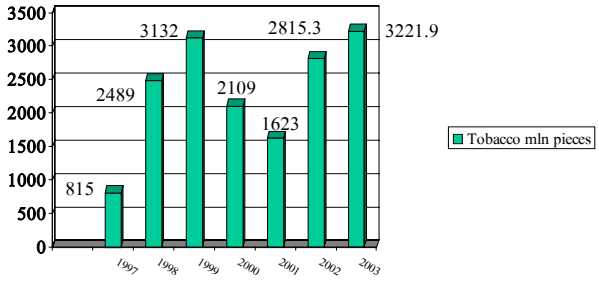
- Initiation of appropriate procedures to insure labeling of the sold or produced tobacco and information about tobacco products which will provide an opportunity for more effective and efficient controls of tobacco flow in the market;
- Monitoring tobacco sales in neighboring countries and data collection (including data about the illegal sale of tobacco), as well as information exchange between appropriate national and international bodies;
- Enacting or strengthening of appropriate laws and punitive measures;
- Effective control of interactions connected with tobacco production in the region to reduce the volume of illegal tobacco sales.

7. Tobacco Production

In Soviet Armenia 10.4 billion items of tobacco products, 5.3 billion itmes of unfiltered cigarettes, 2.9 billion items of high quality filtered cigarettes and 6.8 billion acetate filter cigarettes were produced[19] in 1978. During the first years of independence, the entire industry, including tobacco production, declined and was later privatized.

Since 1997 the volume of tobacco production in Armenia has continually increased. In 2003 the volume of tobacco production increased nearly 4 times as compared with 1997 *(Diagram 4)*. In 2003 tobacco production was estimated at 5%[12] of the overall cultivating industry[4].

Diagram 4. Volume of tobacco production in the Republic of Armenia, 1997-2003



Socio-economic situation in the Republic of Armenia
January-December, 2003

Staticitcal Service of Armenia

In 2003 the volume of tobacco production rose 14.4% as compared with 2002, while worldwide production, according to the WHO, increased an average of 2%.

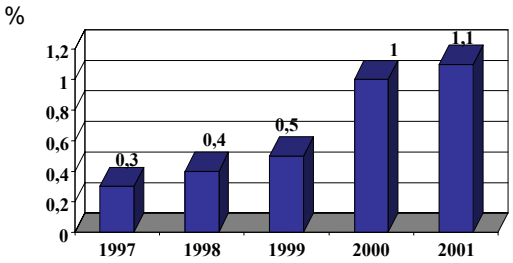
The increase in tobacco production volume naturally has its direct influence on retail sales in the country. Comparing the consumer price index changes of tobacco, it becomes evident that between 2000-2002 the index is unchanged, but in comparison with 1999 it has decreased and had its immediate impact on tobacco retail sales, which has increased with nearly the same rate *(See Diagrams 5 and 6)*.

Notwithstanding the increase in production and the consumption volume, the employment rate in the national tobacco production remains low *(Diagram 7)*. This does not include the administrative staff, tobacco-cultivating farmers, and tobacco sellers in the trade sphere. In 2003 the percentage of human resources working in the tobacco industry in Armenia was 1.4 %.

Moreover, according to the experience of some CIS countries, it is supposed that growth in employment rates should not be expected from the development of the tobacco industry because of the high level of automation.

[4] Cultivating industry in its turn is the 66.8 % of the overall industrial production.

Diagram 5. The percentage of the retail sale of tobacco against the overall sale in the RA



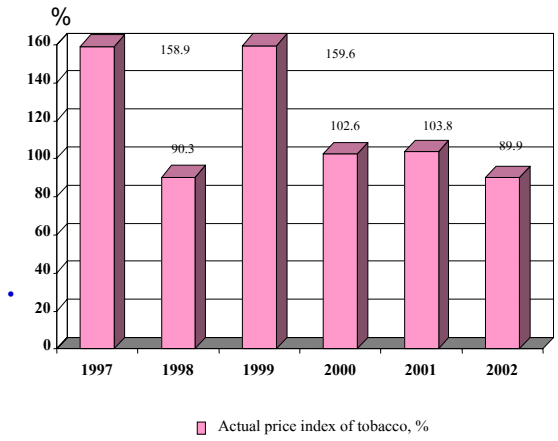
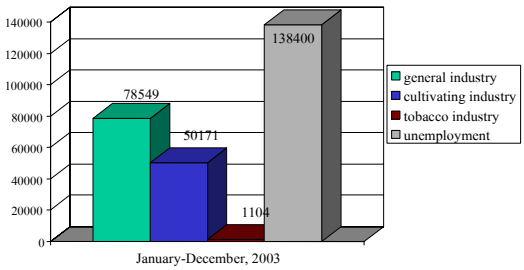


Diagram 6. The consumer price index of tobacco in the RA

Statistical Service of the RA, 2003

** vs. December of the previous year, %*

Diagram 7. The occupancy and unemployment in the Industry of Armenia, 2003



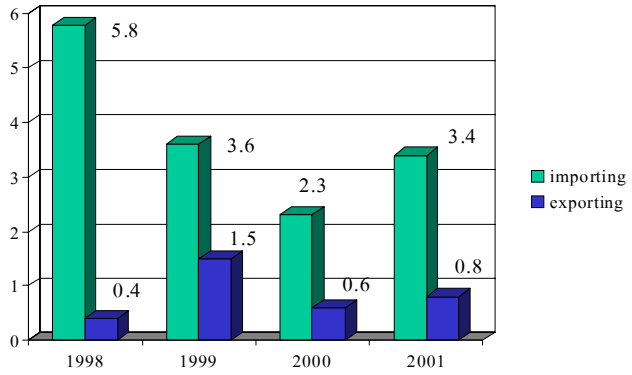
National Statistical Service of RA

8. Tobacco Trade

Armenia is a tobacco importing country, i.e. it imports more than exports. Armenia exports tobacco mainly to Russia, the USA, Georgia, Ukraine, Turkmenistan, Hong Kong and the Islamic Republic of Iran. Armenia imports tobacco mainly from Panama, Turkey, Germany, Bulgaria, Ukraine, the United Kingdom, USA and Greece.

According to the 2002 data from the National Statistical Guideline of the Republic of Armenia, tobacco imports to Armenia has decreased since 1998, though it increased in 2001, as compared with 2000. Though the difference between tobacco importing and exporting was quite high in 1998 (importing exceeded exporting by 14.5%), that figure had decreased by 4.25 times in 2001 *(Diagram 8, Table 11)*[24].

Diagram 8. The percentages of importing and exporting of tobacco and industrial substitutes of tobacco in Armenia, 1998-2003



Statistical Guidelines of Armenia, 2002

Table 11. The imported and exported tobacco and tobacco substitutes in Armenia, 1998-2002, thousand US dollars

	1998	1999	2000	2001	2002
Import	51947,4	30435,4	20 580,2	29 922,5	30114,2
Export	800,1	3563,8	1764,7	2861,2	3647,3

National Statistical Service, RA, 2003

The quantity of tobacco production, imported and exported in 2003 is presented in *Table 12* [23].

Table 12. The imported and exported tobacco and tobacco substitutes inArmenia, 1998-2002, thousand packs

Imported	Exported	Produced	Total resources*	Average retail price per box (drams)
98 643.0	9 682.3	161 095.0	250 055.7	192

**Total resource=Imported + Produced – Exported. Estimated: 20 cigarettes in one pack.*
National Statistical Service, RA, 2003

International experience and approaches

The overall reduction of tobacco consumption has different impacts on the country's economy depending on the type of economy. Some agricultural countries, the economy of which depends on tobacco, and are exporters of it, may loose a lot of workplaces. For example, if Zimbabwe stops tobacco cultivation, it will have lost 12% of workplaces[16]. But in mainly importing countries, the reduction of tobacco consumption will not have a significant influence on the number of workplaces. It is also important that even the most ineffective and inefficient anti-tobacco measures lead to a comparative, and not absolute, reduction in tobacco consumption, i.e. it slows the further increase of consumption.

9. Impact of Tobacco Consumption On Health and Food Expenditures

According to the National Statistical Service of Armenia, tobacco is included in the list of 25 goods in the consumer's basket of goods. According to data from 2001, the cost of foodstuffs have decreased by 0,4%, in comparison with 1999, while tobacco in the same period increased by 0.6%, and bread and breadstuff decreased by 4.2%[12].

In 2003 the average price of one box of tobacco was 192 drams, in accordance with official estimates. That figure is quite a large amount for a citizen of Armenia when taking into account the high level of poverty and unemployment in the country. Based on estimates made in February 2004, it would have been possible to buy 2kg beef, 1.5kg chicken or 5kg rice for the same amount spent on tobacco each week (estimated for a pack per day).

It is well known that the risk of a number of diseases including cardiovascular, respiratory diseases and cancer is higher for smokers. Studies show that some expenses for smokers are directly or indirectly covered by non-smokers. For example, health care expenses of smokers are higher than those of non-smokers. In developed countries the annual expenses for medical care of diseases caused by tobacco use comprise 6-15% of overall health expenditures. Though in middle and low-income countries those expenses are lower (because of insufficient quality and accessibility of health services), smokers will also be faced with the problem of growing health expenses in the future.

Please note that in Armenia, as well as in many other countries, the leading cause of mortality is cardiovascular disease, while 25% of deaths from cardiovascular disease is conditioned by tobacco use. In Armenia, state funds for health care to treat diseases caused by tobacco use are allocated as the following *(Table 13)*[20].

State expenditures for the aforementioned diseases have increased by 48.2% over a one-year period. In *Table 13*, only hospital expenditures for state-ordered treatment of some diseases are presented. The table does not include all cases connected with tobacco use and their expenses, for example acute myocardial infarction cases are absent. Also, state expenditures comprise only a small part of payments made by patients for health services. In some cases the patients themselves cover the expenses for consultation, diagnostic tests and medications. In the overall financing of state-ordered health costs, the expenses for treatment of the diseases included in the table comprised 1.85% of the overall expenses in 2002,

Table 13. Some of the diseases caused by tobacco use and related state expenses 2002-2003, Armenia

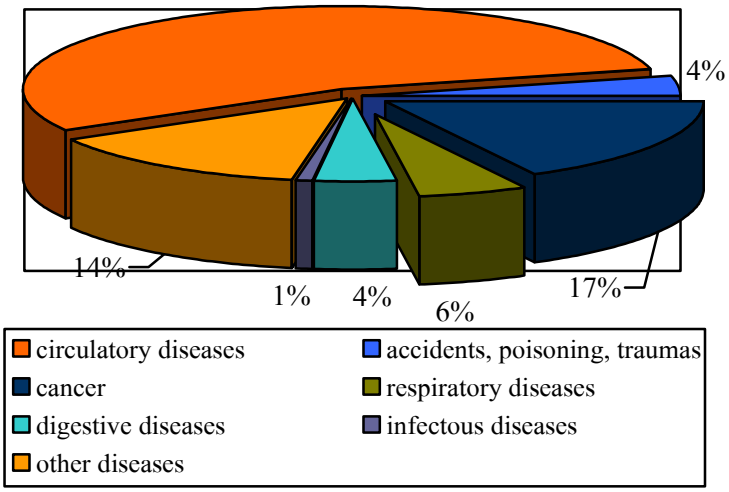
Disease category	Number of Cases 2002	Allocated amount, thousand drams 2002	Number of Cases 2003	Allocated amount, thousand drams 2003
Heart disease	2884	133 270, 8	3395	200 501, 5
Respiratory diseases	2161	99 761, 0	2358	148 759, 8
Lung cancer	143	8 676, 5	156	12 380, 9
Mouth cavity cancer	430	23 895, 7	467	34 204, 2
Throat cancer	503	32 470, 8	518	45 990, 6
Total		**298 074, 8**		**441 837, 0**

and 2.1% in 2003. In 2002 the state's health expenditures equaled 1.2% of the GDP. Expressed in drams, those expenses were 16.1 billion drams in 2002, and 20.6 billion drams in 2003, which accordingly comprises 6.2 and 7.3 percent, respectively, of the overall budget.[20]

Though the healthcare statistical data shows a reduction in morbidity rates, the mortality rate from those diseases increased, comprising a significant share of the overall mortality *(Diagram 9)*[12]. It indicates that in fact not the morbidity decreased, but the number of patients applying for medical care has decreased.

The expenses for the treatment of tumors, heart ischemic disease and some other diseases, as well as the expenses of healthcare to socially vulnerable groups are included in the scope of the state order, or in other words, covered by the state. The remuneration for tobacco related absenteeism from work caused by tobacco use, payment of retirement benefits, etc., are additional expenses for the state. The same applies to families: cost of purchased cigarettes, treatment of diseases, medicines, missed workdays, as well as expenses related to hospital visits by

Diagram 9. Mortality causes, Armenia, 2003.



relatives often become the reason of economic decline and mental suffering for families. For example, in the USA the direct expenses related to the treatment of tobacco-related diseases amounted to 5% of the overall health expenditures, or 12.billion US dollars, in 1985.

Smoking hurts the "passive" smokers as well by increasing their health expenses. In Japan, according to research conducted by medical insurance companies, health care expenditures of children from tobacco using families exceeded those of non-smoking families by 30% (260$ vs.200$ per child).[16]

CONCLUSION

Tobacco use is the major threat for public health. The tobacco control measures are known, effective and are applied in many countries of the world.

Some of the tobacco control procedures are international by their nature and cannot be effectively implemented only in the scope of one country without close international collaboration. The mentioned collaboration will be in conjunction with strategies selected by Armenia on its way to integration with Europe.

Acceding to the WHO Framework Convention of Tobacco Control by Armenia is an important step towards curbing the tobacco epidemic. Comprehensive anti-tobacco procedures will not only promote improvements in Armenia's public health and a healthy lifestyle for future Armenian generations, but will also facilitate the sustainable development of the country's economy.

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