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FIGHT AGAINST THE USE OF TOBACCO

Smoking has taken on the proportions of a worldwide epidemic that is unquestionably associated with increased risk of disease, disability, and deterioration in the quality of life, causing almost 700,000 avoidable premature deaths every year throughout the Region. Passive smoking endangers the health and lives of non-smokers, against their will, and constitutes a violation of the right of all to breathe pure air.

In spite of the efforts made in recent years, only a small number of countries in the Region are meeting with success in lowering the prevalence and consumption of tobacco. The fact that many countries have still not achieved such an impact has made it possible to identify the obstacles and at the same time to demand that prevention and control efforts be intensified and coordinated so that they will be more effective.

This document is presented for the consideration of the XXXIII Meeting of the Directing Council by decision of the 101st Meeting of the Executive Committee. It contains, in addition to an analysis of the situation, strategies for control of the problem and guidelines for development of a plan of action. The Council is requested to discuss the facts and proposals for action indicated and recommended to the Governments, and the pertinent orientations and measures indicated and recommended to the Bureau.

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FIGHT AGAINST THE USE OF TOBACCO

1. BACKGROUND

The growing evidence concerning the harmful effects of tobacco on health has been examined periodically by the Governing Bodies of the World Health Organization (WHO) and has given rise to various policy statements and resolutions on the subject.

The XXXI Meeting of the Directing Council of the Pan American Health Organization (PAHO) reviewed the Health of Adults Program and considered the emphasis given to both the promotion of health and the prevention of disease. Resolution XVI, adopted during that Meeting, recommended that Member Governments publicize the decision to emphasize activities of "primary prevention and early detection work in this field, particularly activities relating to lifestyles, harmful habits, and exposure to environmental pollutants." Smoking was one of the harmful habits emphasized in particular.

The World Health Assembly has approved various resolutions, thereby confirming its overall position with regard to the harmful effects of tobacco and noting that the use of tobacco in any form is incompatible with achievement of the goal of "Health for All by the Year 2000" (WHA31.56, WHA33.55, WHA39.14, WHA40.28). At its most recent meeting, the World Health Assembly encouraged the Director-General to develop a WHO Comprehensive Plan of Action for Tobacco or Health.

PAHO has been collaborating closely with the Member Governments over the last 17 years to promote efforts for the control of smoking.

Since 1971, when the first multinational survey on smoking was carried out in eight Latin American capitals, PAHO's support of initiatives for control undertaken by both governments and nongovernmental agencies has been continuous.

In 1984, as a result of the Meeting on Programs for Control of Noncommunicable Diseases, held in Punta del Este, Uruguay, coordinated actions were initiated for the development of programs to control the use of tobacco. In October of the same year, PAHO convened an Advisory Group that recommended holding intersectoral subregional workshops with a view to identifying action strategies and obtaining the commitment of the political authorities in each country. Those most directly linked to the problem, such as the health, education, legislation, and mass communications sectors, were to be incorporated into the process in order to formulate and carry out effective prevention and control programs with regard to this important risk factor for health.

The recommendation was implemented by PAHO through an effort of linkage and coordination with governments, nongovernmental organizations and scientific associations which culminated in the holding of workshops

on Control of Smoking for the countries of the Southern Tier and Brazil in 1985; for the countries of the Andean Area in 1986; and for the countries of the English-speaking Caribbean in 1987. The Fourth Workshop, which will bring together the countries of Middle America, will be held in November 1988.

The workshops have made it possible to analyze aspects considered to be of a priority nature for the implementation of plans of action, among which are: the establishment of intersectoral and multidisciplinary leadership groups, composed of governmental agencies in the areas of health, education, culture, sports, communications media, social action, trade, publicity, legislation, and agriculture; the setting up of central offices for the fight against the use of tobacco in each Ministry of Health; the formulation of national plans of action; support for direct action through the formal education system; the development of mass information programs; encouragement for the development of restrictive legal measures; and the promotion of epidemiological, political, economic, and social research that will lead to better understanding of the problem of smoking in the country.

As nations and governments have gained greater awareness of the threat represented by smoking, a new stage has been initiated in the struggle against the use of tobacco that requires not only an intensification of efforts, but also the coordination of wills so that such efforts may become more effective.

2. SCOPE OF THIS DOCUMENT

The present document provides a brief review of the problem caused by smoking from two different perspectives:

- First, based on a summary of the information available on the Region of the Americas, the trends and prevalences, the consequences for health, and the most debatable aspects of the problem.

- Second, from a brief examination of the achievements and obstacles involved in prevention and control activities in the Region. The purpose is to provide guidance for a coordinated plan of action to reduce the prevalence of, and in the reasonably near future eradicate, smoking.

3. CURRENT SITUATION

Available evidence indicates that smoking has taken on the proportions and characteristics of a worldwide epidemic (See Chapters 3.1 and 3.2). The magnitude and severity of the damage it causes to the health of both smokers and nonsmokers exceeds that of any another disease risk factor. Smoking should therefore be considered at the world level as one of the greatest enemies of public health (1).

At the same time, it is also considered that elimination of this risk may be the preventive measure of greatest potential impact on the reduction of morbidity and mortality and on the improvement of the quality of life in all the countries.

As the goal of attaining "Health for All by the Year 2000" approaches, elimination of the danger of smoking appears as a logical mechanism of great effectiveness in achieving that objective. Even though the aim of eliminating smoking is highly laudable, it will require the close collaboration and the concerted and sustained effort of all the parties involved--governments, nongovernmental organizations, national and international agencies, and community groups--and the decided action of all. The ultimate purpose of this effort will be to contribute to a tobacco-free American Hemisphere and the first generations of nonsmokers.

3.1 Trends and Prevalence

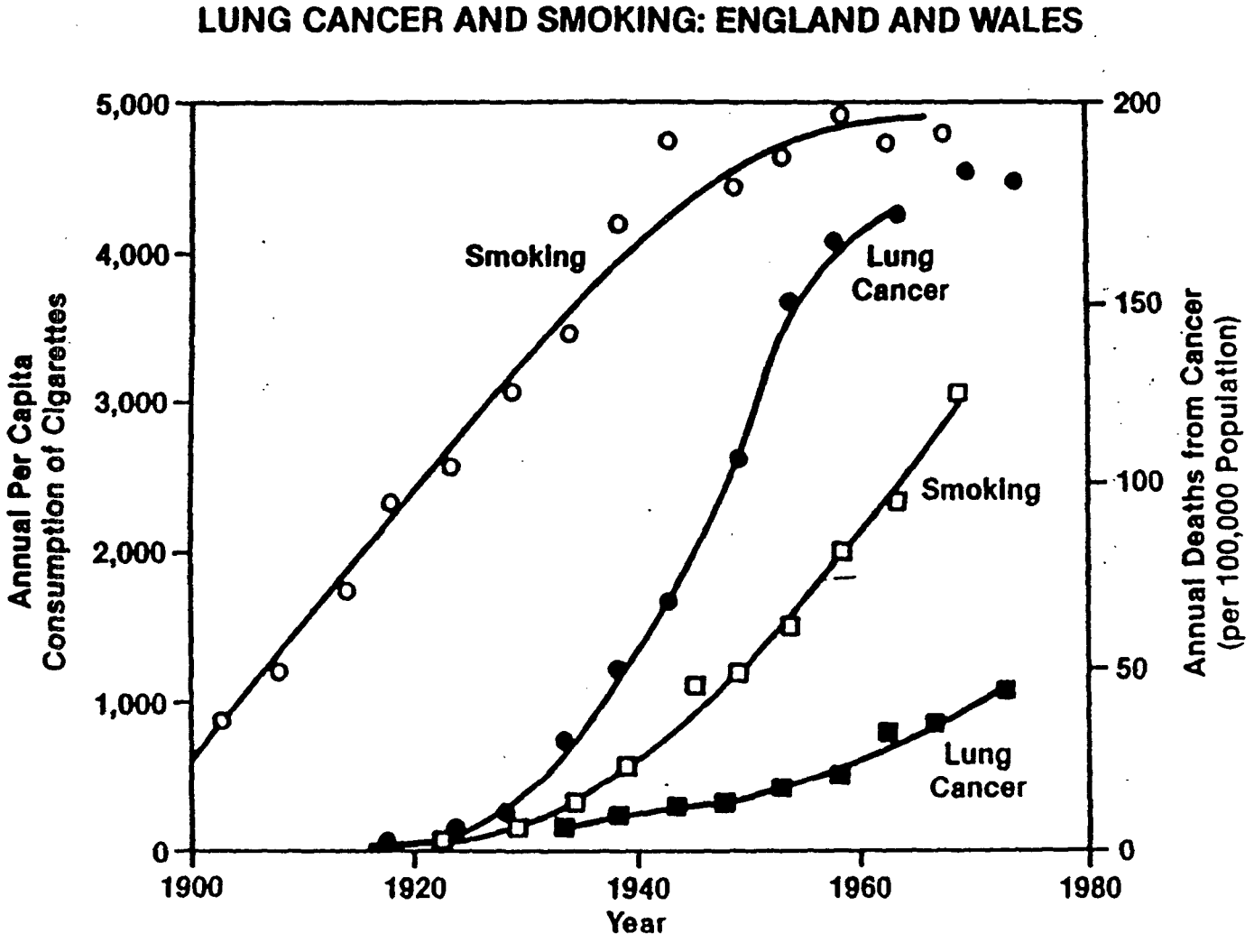
The statistics from various countries show that tobacco consumption began to increase at the beginning of the century and intensified after World War I. Numerous illustrations bear out the close correlation between such consumption and deaths attributable to lung cancer, ischemic heart disease, and many other diseases (See Figures 1 and 2). They point dramatically to the most outstanding characteristics of this worldwide epidemic. Recent information reveals that as smoking increases among women (2), lung cancer is also increasing rapidly and is overtaking breast cancer in frequency in some communities.

Despite the fact that a small number of countries in the Region have had a decline in the prevalence of smokers during the last two decades, unfortunately, the proportion of adolescents and young adults who take up smoking and the age at which they do so (12-14 years), remain almost invariable. Moreover, among adolescents, the cessation rates are very low, increasing gradually with age (3). The decrease in the smoking rate is mainly due to the fact that a growing number of adult smokers, particularly the more educated, are giving it up. Adolescent women show a greater trend toward daily smoking than men of similar age. Between 18 and 19 years of age, more than 30% of adolescents smoke daily, but women do so to an even greater extent. The explanation for this pattern of consumption in women is not yet understood and needs to be studied in greater depth.

Statistics available for North America show that the prevalence of smoking is higher among workers and the unemployed than among administrative, technical, and professional employees (4, 5).

Between 1965 and 1986, prevalence declined among adults in the United States, from 51.1% to 29.5% among men, and from 33.3% to 23.8% among women (Table 1). The figures available for Canada are similar and also indicate a reduction of approximately 1% of smokers per year for men and approximately 0.7% per year for women (4,5).

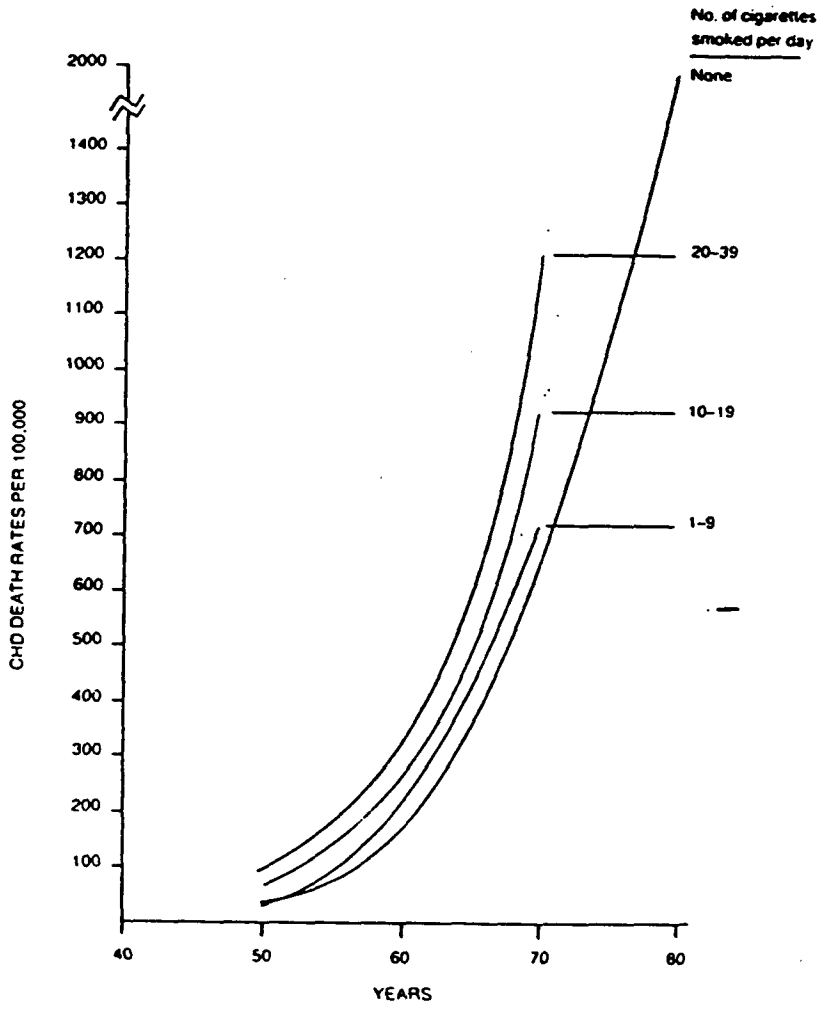
Figure 1



Trends in smoking prevalence and lung cancer, British males and females. The data for this chart are for England and Wales. In men, smoking (○) began to increase at the beginning of the 20th century, but the corresponding trend in deaths from lung cancer (●) did not begin until after 1920. In women, smoking (□) began later, and the increase in lung cancer deaths in women (■) has only appeared recently. Redrawn with permission from the paper of Cairns (4).

Figure 2

CHD DEATH RATES (PER 100,000), BY AGE AND NUMBER OF CIGARETTES SMOKED PER DAY, FEMALES



SOURCE: Derived from the ACS 25-State study (9,7)

Table 1

Percentage of current cigarette smokers among adults, by year and survey, United States, 1944–1986

Year	Survey	Age (≥ years)	Current cigarette smokers (percentage)		
			Men	Women	Total
1944	GP	18	48.0	36.0	41.0
1949	GP	18	54.0	33.0	44.0
1955	CPS	18	54.2	24.5	37.6
1964	NCSH	21	52.9	31.5	40.3
1965	NHIS	17	51.1	33.3	41.7
1966	CPS	17	50.0	32.3	40.6
	NCSH	21	51.9	33.7	42.2
1967	CPS	17	49.1	32.1	40.1
1968	CPS	17	47.0	31.2	38.6
1970	NHIS	17	43.5	31.1	36.9
	NCHS	21	42.3	30.5	36.2
1974	NHIS	17	42.7	31.9	37.0
1975	NCSH	21	39.3	28.9	33.8
1976	NHIS	20	41.9	32.0	36.7
1978	NHIS	17	37.5	29.6	33.2
1980	NHIS	20	38.3	29.4	33.6
1983	NHIS	20	35.7	29.4	32.4
1985	CPS	16	31.8	25.4	28.4
	NHIS	20	33.2	27.9	30.4
1986	OSH	17	29.5	23.8	26.5

NOTE: GP, Gallup Poll; CPS, Current Population Survey (Supplement); NCSH, National Clearinghouse for Smoking and Health (Adult Use of Tobacco Survey); NHIS, National Health Interview Survey; OSH, Office on Smoking and Health (Adult Use of Tobacco Survey). NHIS data are not age adjusted.

SOURCE: US DHHS (1987c).

Prevalence figures available for Latin America and the Caribbean are limited and with few exceptions do not permit comparisons over time. Table 2 shows a wide range in the prevalence figures for those years of from 28% to 60% in the male adult population. The majority, however, were around 50%, much above the prevalences for North America.

It is important to point out that in the United States of America, after a sustained increase in prevalence since the 1920s, a reduction in per capita consumption has been recorded for the population over 18 years of age, from 4,148 cigarettes per year in 1973 to 3,196 in 1987, or 23% in 15 years (Table 3). Furthermore, a sustained decline in the tar and nicotine content has been documented for cigarettes consumed in North America, as shown in Figure 3 for the United States.

The per capita consumption figures available for Latin America and the Caribbean (Table 4) are lower, but there is indirect evidence that they were increasing rapidly by 2% and even 3% a year after 1979 (5) (Table 5). Because the tar and nicotine content of cigarettes in the areas mentioned generally continues to be considerably higher than in North America (6) (Table 6), per capita consumption figures are not strictly comparable.

The information summarized in the foregoing paragraphs reflects a decided worsening of the situation in many of the countries of Latin America and the Caribbean, where the accelerated emergence of health problems known to be linked to smoking may already be perceived--cancer, cardiovascular diseases, chronic respiratory diseases, etc.--while those caused by the infectious and nutritional diseases, among others, have not yet disappeared.

3.2 The Consequences for Health

Scientific information concerning the dangers that smoking represents for health began to emerge around 1920. Since then an impressive volume of evidence has been accumulated that indisputably establishes the association between exposure to tobacco and a greater probability of occurrence of the following: cancers of the lung, the oral cavity, the larynx, the trachea and bronchia, the esophagus, the pancreas, the kidney, and the urinary bladder; coronary heart diseases and cerebrovascular and peripheral vascular ischemia; and chronic bronchitis and emphysema, in addition to risks for human reproduction. Among the latter, which are less well known, there is a greater probability of spontaneous abortion, fetal and neonatal death, premature birth, and low birthweight which, in turn, are closely associated with perinatal morbidity and mortality.

It has been established that at least 90% of the deaths from lung cancer, 75% of those from chronic bronchitis, and 26% of those from coronary heart diseases are attributable to smoking (7,8,9). These data have made it possible to estimate that approximately 700,000 premature deaths that can be avoided occur unnecessarily each year in the Region.

Table 2

PERCENTAGE OF SMOKERS AMONG THE MALE AND FEMALE ADULT POPULATION IN VARIOUS COUNTRIES (1970s and 1980s)

Country	Men %	Women %	Year	Source
Uruguay	60	32	1970-1980	a
	60	32	1974	b
	44	23	1988	c
	45	45	1985	d
Argentina	58	18	1970-1980	a
(La Plata)	57.9	24	1971	e
(La Plata)	51	18	1972	b
(Bs. As.)	39.1	27,2	1981	b
Jamaica	43	27	1988	c
	56	14	1970-1980	a
Brazil	54	37	1970-1980	a
(Sao Paulo)	54	20	1971-1972	g
(Workers)	52	37	1983	g
	33	20.3	1970	b
	50	46	1980	b
	40	36	1988	c
	59	53	1980	d
Bolivia	62.3	37.5	1986	h
Chile	45	26	1970-1980	a
	47.1	26.4	1971	b-e
	41	37	1988	c
	52	18	----	d
Guyana	48	4	----	d
Colombia	52	18	1970-1980	a
(Bogota)	52.4	21.1	1971	e
	37	18	1988	c
	56.2	31.4	1977-1980	h
Venezuela	45	26	1970-1980	a
	32	23	1988	c
	46.6	26.3	1971	e
	53	26	----	h
Mexico	45	18	1970-1980	a
(D.F.)	44.7	16.5	1971	e
	37	17	1988	c
Cuba	40	---	1970-1980	a
Ecuador	39	16	1988	c
El Salvador	38	12	1988	c
Canada	37	33	1986	i
Guatemala	36	10	1970-1980	a
(urb.)	30	10	1972	g
(urb.)	36.2	10.1	1971	e
Honduras	36	11	1988	c
Costa Rica	35	20	1988	c
	33	9	1986	f
Peru	34	7	1970-1980	a
	28	17	1988	c
(Lima)	34.2	6.5	1971	e
(Lima, Callao)	77.27	68.33	----	h
United States	29.5	23.8	1986	j

a- WHO. Report of the Director General on the WHO Program on Tobacco and Health. 77th Meeting, Executive Board, Nov. 1985.
b- PAHO. Control del Hábito de Fumar. Taller Subregional para el Cono Sur y Brasil. 1986.
c- The Gallup's Organization, Inc. The Incidence of Smoking in Central and Latin America, 1988.
d- WHO. Tobacco or Health. Report of the Director-General. Forty-first World Health Assembly, 23 March 1988, Annex 2.
e- PAHO. *Encuesta sobre las características del hábito de fumar en América Latina.* Daniel Joly. 1977.
f- Cartén and Vargas. Prevalencia del Fumador en Costa Rica. UCR-CCSS, 1986.
g- WHO-IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans. Vol. 28, IARC, Lyon, France, p. 77.
h- PAHO. Control del hábito de fumar. Taller Subregional para el Area Andina. 1987.
i- Federal Prevention Committee of Smoking on National Program to Reduce Tobacco Use in Canada. 1988, p. 6.
j- U.S. Department of Health and Human Services. The Health Consequences of Smoking, Nicotine Addiction. A report by the Surgeon General. 1988, p. 566.

Table 3

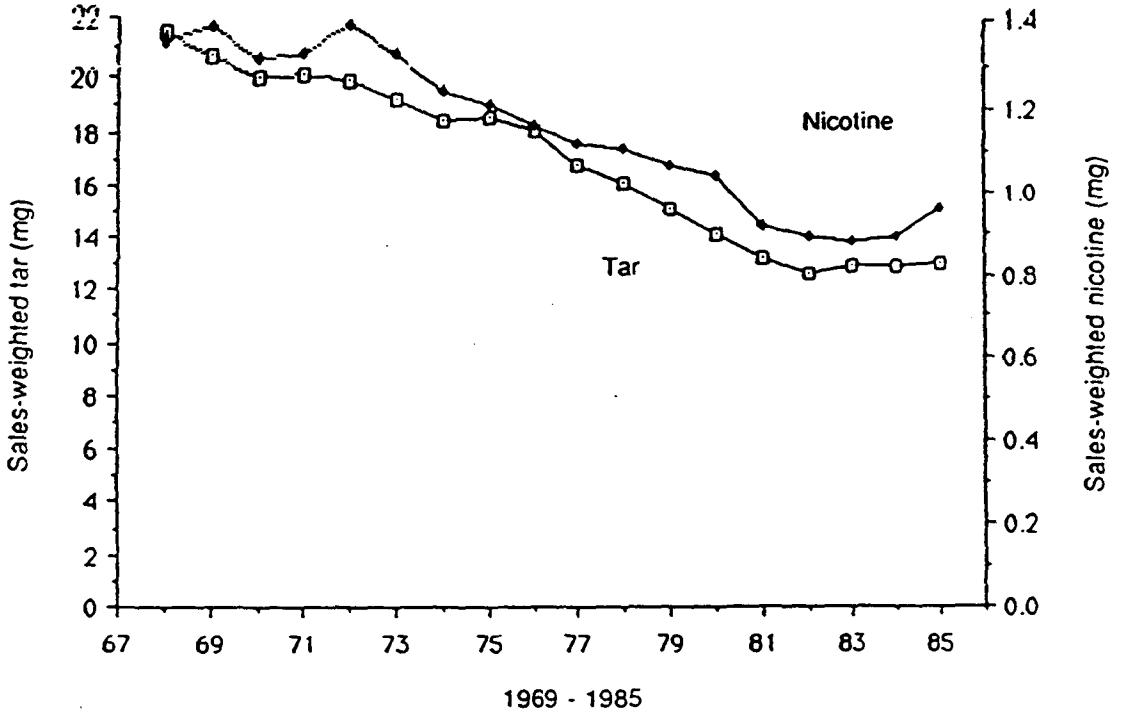
TOTAL CIGARETTE CONSUMPTION AND CONSUMPTION PER CAPITA 18 YEARS OF AGE AND OLDER, 1973 TO 1987, UNITED STATES

Year	Consumption (billions)	Per capita consumption (≥ 18 years old)	Per capita consumption change from previous year (percentage)
1973	589.7	4.148	
1974	599.0	4.141	-0.2
1975	607.2	4.123	-0.4
1976	613.5	4.092	-0.8
1977	617.0	4.051	-1.0
1978	616.0	3.967	-2.1
1979	621.5	3.861	-2.7
1980	631.5	3.844	-0.4
1981	640.0	3.836	-0.2
1982	634.0	3.739	-2.6
1983	600.0	3.488	-7.2
1984	600.4	3.446	-1.2
1985	594.5	3.370	-2.3
1986	583.8	3.274	-2.9
1987(est.)	574.0	3.196	-2.4

SOURCE: USDA (1986)

Figure 3

SALES-WEIGHTED AVERAGES OF TAR AND NICOTINE PER CIGARETTE, 1968-1985 (1985 DATA PRELIMINARY)



SOURCE: U.S. Federal Trade Commission (February 1988).

Table 4

PER CAPITA CONSUMPTION OF CIGARETTES IN THE AMERICAS, 1982

Country	Per cápita Consumption
Cuba	2,857
Canada	2,797
United States of America	2,678
Uruguay	1,241
Argentina	1,136
Venezuela	1,089
Brazil	1,051
Colombia	873
Costa Rica	868
Belize	850
Chile	847
Nicaragua	846
Guyana	656
Jamaica	650
Panama	595
Honduras	563
Paraguay	521
El Salvador	508
Ecuador	508
Guatemala	325
Haiti	316
Peru	216
Bolivia	206

Source: WHO, IARC, Vol. 38, Lyon, France, 1986, pp: 70-71.

Table 5

AVERAGE ANNUAL CONSUMPTION OF TOBACCO IN VARIOUS REGIONS OF THE WORLD, 1962-1977

	Average 1962-1964	Average 1972-1974	1975	1976	1977
			(kg/person/year)		
World	1.12	1.17	1.17	1.16	1.15
Developing countries	0.78	0.79	0.79	0.79	0.81
Latin America	1.09	1.02	1.04	1.14	1.18
Africa	0.30	0.36	0.41	0.37	0.39
Eastern Mediterranean	0.63	0.80	0.85	0.89	0.92
Eastern Asia	0.82	0.82	0.81	0.79	0.82
Developed countries	1.87	2.11	2.13	2.10	2.02

Source: Food and Agriculture Organization, Rome.

Table 6

IARC MONOGRAPHS VOLUME 38

Sales-weighted average tar deliveries in various countries, 1982[a]

Tar yield (mg/cigarette)	Developed countries	Developing countries or territories
0-10	None	None
11-16	Australia Belgium Canada Finland Germany, Federal Republic of Netherlands New Zealand Sweden Switzerland UK USA	Chile El Salvador Fiji Guatemala Kenya Mauritius Nicaragua Panama Papua New Guinea Trinidad and Tobago Venezuela
17-22	France Italy	Argentina Bangladesh Barbados Brazil Costa Rica Cyprus Hong Kong India Malawi Malaysia Malta Mexico Nigeria Sierra Leone Singapore South Africa Sri Lanka Suriname Zimbabwe
23-28	Denmark	Indonesia Pakistan Zaire
29+	None	None

[a] As supplied by the tobacco industry; from Lee, P.N. (1984)

3.3 Nature of the Evidence

The abundant evidence accumulated comes from various sources (clinical, toxicological, and epidemiological studies, both descriptive and analytical, in addition to community interventions) and is consistent with accepted epidemiological criteria for establishing causality, since the association between smoking and the conditions listed above is considered to be not only statistically significant but also sufficiently strong, consistent, specific, and coherent. In addition, it meets the requirements of being scientifically plausible and of bearing an unquestionable relationship, both in time and with regard to dosage and response, to exposure to the various toxic compounds produced in the burning of tobacco.

Obviously, for ethical, moral, and practical reasons, it is impossible to provide definitive proof of causality regarding the harmful effects of smoking. Nor is it necessary to persist in the search for such proof, since it can be demonstrated that, after a period of latency, quitting smoking reduces most of the harmful effects on health that have been mentioned. Any more than it was necessary for John Snow to have absolute proof of the causes of the London epidemics of cholera in the last century, or for Goldberger to have absolute proof of the causes of pellagra. Both were certain there was more than sufficient and necessary proof for intervening and successfully solving the problems they faced.

3.4 Passive Smoking

Having established the consequences of smoking for health, concern arose regarding the risks nonsmokers are involuntarily subjected to who live in the proximity of smokers. Such is the case of family members, friends, and colleagues of smokers, who have been called "involuntary" or "passive" smokers. It is known that, in addition to the principal flow of gases and particulates (mainstream) that smokers inhale, equally or more highly toxic and carcinogenic elements are also produced at the end of a lighted cigarette (sidestream) (Table 7).

According to the Report of the Surgeon General of the United States of 1986, it may be concluded that:

- Involuntary exposure to cigarette smoke causes disease, including lung cancer, among previously healthy nonsmokers.

- The children of parents who smoke, when compared with those of nonsmoking parents, have a higher frequency of infections and respiratory symptoms and less increase of functional capacity as the lung matures.

- Merely separating smokers and nonsmokers in the same environmental space will reduce but will not eliminate exposure to tobacco smoke (10).

Table 7

–Concentrations of the major toxic and tumourigenic agents in cigarette smoke and their ratio in mainstream smoke (MS) and sidestream smoke (SS)[2]

Phase and agent(s)	MS level	SS/MS ratio*	Phase and agent(s)	MS level	SS/MS ratio*
Gas			Stigmasterol	53 μg	0.8
Carbon dioxide	10–80 mg	8.1	Total phytosterols	130 μg	0.8
Carbon monoxide	0.5–26 mg	2.5	Naphthalene	2.8 μg	16
Nitrogen oxides	16–600 μg	4.7–5.8	1-methylnaphthalene	1.2 μg	26
Ammonia	10–130 μg	44–73	2-methylnaphthalene	1.0 μg	29
Hydrogen cyanide	280–550 μg	0.17–0.37	Phenanthrene	2.0–80 ng	2.1
Hydrazine	32 μg	3	Benz(*a*)anthracene	10–70 ng	2.7
Formaldehyde	20–90 μg	51	Pyrene	15–90 ng	1.9–3.6
Acetone	100–940 μg	2.5–3.2	Benzo(*a*)pyrene	8–40 ng	2.7–3.4
Acrolein	10–140 μg	12	Quinoline	1.7 μg	11
Acetonitrile	60–160 μg	10	Methylquinoline	6.7 μg	11
Pyridine	32 μg	10	Harmane	1.1–3.1 μg	0.7–2.7
3-vinylpyridine	23 μg	28	Norharmane	3.2–8.1 μg	1.4–4.3
N-nitrosodimethylamine	4–180 ng	10–830	Aniline	100–1200 ng	30
N-nitrosoethyl-methylamine	1.0–40 ng	5–12	*o*-toluidine	32 ng	19
N-nitrosodiethylamine	0.1–28 ng	4–25	1-naphthylamine	1.0–22 ng	39
N-nitrosopyrrolidine	0–110 ng	3–76	2-naphthylamine	4.3–27 ng	39
Particulate			4-aminobiphenyl	2.4–4.6 ng	31
Total	0.1–40 mg	1.3–1.9	*N*-nitrosonornicotine	0.2–3.7 μg	1–5
Nicotine	0.06–2.3 mg	2.6–3.3	4(methylnitrosamino)-1-(3-pyridyl)-1-butanone	0.12–0.44 μg	1–8
Toluene	108 μg	5.6	*N*-nitrosoanatabine	0.15–4.6 μg	1–7
Phenol	20–150 μg	2.6	*N*-nitrosodiethanolamine	0–40 μg	1.2
Catechol	40–280 μg	0.7	Polonium 210	0.03–0.5 pc	NA

*NA = not available.

The findings concerning passive smoking bring out other aspects of the problem that are at the same time debatable and of great practical importance. Primarily, they confirm once again the risks of smoking for the smoker and emphasize the magnitude of the problem, since not only the smokers themselves are exposed to these risks but also those who surround them, though they do not smoke. This is of special significance for those with smokers at home and in the workplace, especially if they are exposed to inhalation of other chemical substances that potentiate the harmful effects of tobacco.

It has been speculated that approximately 5,000 annual deaths are attributable to "passive smoking" in the United States. It may thus be assumed that in the rest of the Hemisphere, where the prevalence of smoking is even greater and there are fewer restrictions, at least a similar number of deaths from this cause occur.

This casts doubt on the effectiveness of partial restrictions to smoking in work environments or other enclosed places and suggests the need for total prohibition. It also emphatically establishes the preeminence of the right of all to breathe pure air over the right of smokers to pollute the air and make others ill.

3.5 Addiction

In light of the convincing information on the harmful effects of tobacco, it is appropriate to ask why smokers continue to smoke.

The information now in hand on the pharmacology, metabolism, sites, and mechanisms of action of nicotine and other alkaloids that constitute the active pharmacological elements of the combustion of tobacco makes it possible to respond to this question.

The use of nicotine meets the so-called "primary and additional criteria" that are used to estimate dependency on drugs or other addictive substances.

The patterns for nicotine use are regular and compulsive, have psychoactive effects (are mood-altering), develop progressive tolerance, and cause physical dependency characterized by the appearance of an abstinence syndrome whenever its use is suspended. The pharmacological and behavioral processes that determine addiction to nicotine are similar to those that determine addiction to opiates, alcohol, and other substances. Similar incentives of an environmental nature, together with social pressures and others, have a significant influence on initiation, use patterns, discontinuance, and relapse with respect to all these substances. For the same reasons, many addicted persons are not able to voluntarily stop smoking and give it up for any significant length of time without the assistance of cessation programs.

These considerations bear out the importance of two situations:

- For many smokers the assumed freedom of choice to give up the habit, as adduced by the tobacco industry, does not exist, since they are addicts.

- Accordingly, it is clear that services or clinics need to be provided in order to assist smokers in their efforts to give up their addictive consumption (11).

4. CONTROL OF SMOKING: ACHIEVEMENTS AND LIMITATIONS

Because of the complexity of the smoking problem, the multiplicity of factors that lead to its initiation, and the interdependence among them, it is difficult to identify the control measures that have had the greatest impact. It is more even more difficult to attempt to measure the extent thereof.

However, in the countries of the Region an impressive number of activities for smoking prevention and control have been developed, including:

- the convening of national prevention and control workshops;

- the establishment of coordinating committees at various levels;

- the formulation of plans of action;

- the establishment of "national smokeouts";

- the promotion of scientific research concerning the behavioral aspects of smoking;

- the imposition of legal restrictions on advertising, sales, warnings, and the smoking of cigarettes in public places;

- formal inclusion of education in the school curricula;

- the dissemination of information through the mass media.

The results of all these efforts have been encouraging and very noticeable for some countries in the Region, although for many others they have not been entirely satisfactory. An analysis of what has taken place in these countries has been instructive and makes it possible to identify both the obstacles that have been detected and the prospects for solution. Both aspects are considered in the following chapters.

4.1 Economic Repercussions

The economic repercussions of smoking are numerous and complex, and they should be examined from at least two different points of view--considering, on the one hand, the economic benefits that are generated from the production and consumption of tobacco, and on the other, the losses caused by the direct and indirect consequences of such consumption.

The economic benefits are derived from cultivation, export, and the manufacture and marketing of cigarettes, and from the jobs and income these generate. In addition, consideration should be given to the revenue collected by governments in taxes on the production and sale of tobacco.

Losses have been identified as both direct and indirect: the first are represented by the consumer expenditure on the purchase of cigarettes and by the direct health expenditures that result from consumption in terms of increased medical consultations, hospitalizations, drugs, etc.; the second are derived not only from the loss of productivity from premature death, disability, and absenteeism but also from property damage, increased fire hazards, and accidents.

To these should be added the damage resulting in some countries in deforestation and soil impoverishment, the pollution caused by tobacco cultivation, and the intensive use of pesticides and energy in processing. In addition, it is necessary to take into account the decreased availability of suitable land for growing food, especially important in the developing countries in which, because of low crop yields, it is necessary to sow larger land areas.

Furthermore, the constant deterioration of health and of the "quality of life" caused by smoking cannot be measured in monetary terms; it must be looked at in terms of its ethical, political, and social dimensions.

Because of the importance of tobacco production for the economies of some countries, at first glance it seems to be understandable that some governments hesitate to impose restrictions. However, when the benefits are weighed against the losses, it could be said that the latter outweigh the former. Figures published for Canada in 1984 and 1985 (12,13) indicate that the cultivation, manufacture, and marketing of tobacco generated an income of Can$6,100, of which 64%, or Can$3,800 million, was channeled into the various levels of government in the form of taxes. However, estimates of quantifiable losses in 1982 came to a total of Can$7,100 million, which makes for an annual net loss for the country of Can$3,300 million dollars.

The only apparent advantage for the governments is that taxes on tobacco are "comfortable taxes" and relatively "acceptable" for the population. However, it should be borne in mind that there are

alternatives to tobacco crops--as long as they are equally profitable--in which jobs can be transferred to other sectors of the economy and taxes may be derived from other sources, as is already happening in some developed countries. The losses to society caused by smoking are the only losses that are inescapable and untransferable, and the only possible solution is to eliminate consumption.

4.2 Obstacles to Control

Even the briefest examination of the smoking problem in the Region of the Americas reveals a situation of acute contrast:

On the one hand, in North America an improvement has been noted, whereas in Latin America and the Caribbean, generally speaking, the problem has worsened. The simultaneous occurrence of these two opposing trends is not mere chance. They are apparently the consequence of two phenomena, one economic and the other political, that are mutually reinforcing (the effect of concomitant sociocultural and psychological factors is not ruled out):

The first has been called the "transnationalization" of tobacco production, and the second stems from lack of action on the part of some of the governments (14).

The large transnational conglomerates that now dominate almost the entire world tobacco market have been successful in compensating for the reduction in sales in the industrialized countries, as a result of restrictions imposed by those governments, by directing efforts toward the penetration of the weakest markets: adolescents, young women, and the developing economies. This is reflected in the accelerated increase in the participation of the developing countries in both the consumption and production of tobacco worldwide (15) (Table 8).

The promotional efforts of the tobacco industry have focused on public relations campaigns designed, on the one hand, to present an attractive image and, on the other, to direct attention away from two important points: that they are selling a product harmful to health, and that a larger number of deaths have occurred as a consequence of smoking than in all the wars of the present century (16).

In 1986 it was estimated that the tobacco industry spent more than US$2,000 million on advertising to present itself as a creator of wealth, a source of jobs, a promoter of development, a patron of the arts and of sports, and a defender of individual freedom. (17) The industry has also systematically denied that it is selling a product that is harmful to health, arguing that there is no "definitive proof" of the effects of smoking, that smoking is a personal choice rather than an addiction, that any restriction of its use violates individual freedom, that there are other health problems that are more urgent or more easily solved, and that the economic benefits of tobacco outweigh the losses.

Table 8

TOBACCO CONSUMPTION WORLDWIDE
(percentage in metric tons)

Countries	1961	1975	1985	1995
Industrialized	41.5	36.9	30.8	26.2
Centrally planned	20.9	14.3	14.8	14.2
Developing	47.6	48.8	54.4	54.6
Total	100.0	100.0	100.0	100.0

TOBACCO PRODUCTION
(in thousands of metric tons)

Countries	1961	%	1985	%	1995	%
Industrialized	1,328	35.5	1,400	23.3	1,500	19.0
Developing	2,033	54.2	3,800	63.3	3,400	68.3
Centrally planned	387	10.3	800	13.4	1,000	12.7
Total		100.0		100.0		100.0

Source: World Bank, 1982

The lack of regulatory action by many governments has been based perhaps on the perception that the tobacco industry promotes expansion of the economy, generating both jobs and "comfortable taxes," or that anti-tobacco programs are ineffective or untimely in the face of the undeferrable needs created by other health problems that are considered to have greater priority.

Various legitimately involved interest groups--farmers, the packaging industry, advertising and marketing companies, the mass media, and even sports and artistic associations that benefit financially--tend to support the attitudes of such governments to the detriment of the general interests of the population.

The phenomena cited are working against the health of the population. While the tobacco companies and the interest groups pursue the profit motive, the "complaisance" of many governments is often due to lack of information and clear-cut policies. The resulting losses, however, are passed on to, and paid for by, the entire population.

4.3 Successful Examples and Prospects for Control

The countries that have demonstrated success in reducing the prevalence of smoking have gone through several successive stages in their efforts to solve this problem.

As the unquestionable evidence concerning the consequences of smoking for health was accumulating, the first information and educational activities for the public were also being undertaken. An initial reduction in prevalence was observed and the problem gradually and increasingly began to attract the attention of the population. In the 1980s the so-called "conversion of prevalence" took place. From two-thirds smokers and only-one third nonsmokers in the 1960s, the reduction that took place resulted in only one-third smokers and two-thirds nonsmokers. When nonsmokers became the decided majority, the following measurable changes in public opinion could also be seen:

- for the first time smoking began to be perceived as "socially unacceptable";

- the legality of promoting or even selling a product recognized as harmful to the consumer began to be questioned;

- in light of the findings on the effects of passive smoking, the population began to demand the right to breathe "pure air" and to be provided with environmental protection against the risks of tobacco.

Perhaps the most important conclusion that can be drawn from these facts is that in practice the prevention and control of smoking were demonstrated to be technically and economically feasible and also socially and politically viable.

In addition, information confirming the predictions of the many epidemiological studies of the 1960s and 1970s is beginning to accumulate. And indeed, follow-up studies are also demonstrating that significant reductions in the prevalence of smoking produce, after a period of latency, a significant reduction in cardiovascular mortality (14).

The probability of dying prematurely is between two and three times greater for smokers than nonsmokers (relative risks from 1.86 to 3.00, depending on degree of exposure to tobacco), and the prevalence of consumption is at least 30% among the general population (18). Thus smoking has what has been called a very high "attributable population risk." This indicator, which measures the potential long-term impact of eliminating a risk, reveals that for smoking this impact may be, for various conditions, greater than 50%--that is, higher than for any other single preventive measure.

4.4 Policies and Programs

For a while it was thought that the simple act of informing the public of the dangers of tobacco would cause the majority of consumers to give it up.

It is necessary to bear in mind, however, that tobacco consumption has roots in Latin America that date from the pre-Colombian period and that many countries had a monopoly on it and promoted its sale in colonial times (Estanco del Tabaco). Originally tobacco production was under the responsibility of national companies; in the postwar period the transnational conglomerates took control, at which time a growth in consumption took place.

Even in countries where the prevalence of consumption is declining, the sale of tobacco continues to be legal, and a proportion of the population--which fortunately is decreasing--still continues to regard smoking as socially acceptable. The tobacco industry continues to actively promote consumption and has large resources as well as support from the groups that benefit from these sales.

The problem is complex and cannot be solved in the short term or with simple solutions. It requires the concerted and sustained efforts of many participants, both at the intersectoral level and in the macropolitical sense.

Thus, the need arises to formulate broad-based national policies and programs that can help make for the first tobacco-free generations in the American Hemisphere by the year 2000.

The possible specific objectives for the health sector should be aimed at:

- protecting the health and rights of nonsmokers;

- helping nonsmokers to remain nonsmokers (prevention) and helping new generations of children and adolescents to stay free of inducements to smoke (promotion);

- raising consciousness among smokers regarding the risks of tobacco and helping those who want to give up smoking (cessation).

4.5 Strategies

As control programs have been gathering greater impetus, more effective strategies have been defined, namely:

4.5.1 Promotion of legislation so that the countries:

- prohibit and/or restrict the promotion of tobacco sales and advertising;

- impose the compulsory use of warnings regarding its dangers and addictive nature, and disseminate them effectively;

- reduce the content of tar, nicotine, and other toxic substances in cigarettes;

- prohibit and/or restrict smoking in public places, including schools, hospitals, transportation, and other places where people congregate;

- promote the establishment of a causal responsibility between tobacco and disease that can be cited in judicial acts, and support those affected in their demands for indemnity.

4.5.2 Promotion of programs that:

- report on the problem through the mass media;

- provide education on the effects of tobacco on schoolchildren and specific high-risk groups (adolescents, pregnant women, etc.) through innovative programs utilizing peers and companions. These programs must be open to objective evaluation;

4.5.3 Provision of cessation and counseling services so that:

- encouragement and help are provided in various ways for smokers who already show signs of addiction so that they will give up smoking;

4.5.4 Development of economic interventions that will:

- increase the profitability of alternatives to the cultivation and marketing of tobacco;
- provide alternative incomes for the various groups that currently benefit from the marketing of tobacco;
- generate taxes which by increasing prices, will discourage cigarette consumption;

4.5.5 Encouragement of citizen action that will:

- support efforts by communities and volunteer groups to extend and enforce restrictive legislation;
- disseminate information and promote operations research on the characteristics of consumption and the effectiveness of prevention and control measures;
- raise consciousness with a view to making smoking socially unacceptable;

4.5.6 Promotion of research and increase of knowledge in priority areas, such as:

- the factors that induce taking up the habit;
- the effectiveness and acceptability of cessation programs;
- the risks of passive smoking;
- research on groups at high risk in becoming addicted;
- the addictive nature of smoking and the active pharmacological principles;
- the factors that determine the effectiveness of public relations messages, both in preventing access to smoking and in promoting cessation.

5. GUIDELINES FOR A PLAN OF ACTION

In order to fulfill the purposes and objectives that have been indicated and to put the strategies outlined above into practice, a plan of action is required that will encourage the participation of national, governmental, and nongovernmental agencies and institutions and also promote international action.

The following aspects are emphasized:

5.1 collaboration and coordination of governmental and non-governmental organizations and institutions, professional health associations, and other parties interested in solving the smoking problem;

5.2 establishment of cooperation programs between countries and agencies at the regional and subregional levels;

5.3 development, collection, and exchange of information and educational material;

5.4 training to increase technical appropriateness and especially the ability to implement control programs;

5.5 promotion of research in the countries of the Region;

5.6 establishment of coordinated mechanisms to finance, with the collaboration of various participants, smoking prevention and control programs.

The information summarized in this document clearly poses new challenges and greater responsibilities, both for the Member Governments and for PAHO and other agencies.

A new obligation has presented itself, but at the same time a propitious opportunity has arisen to embark upon a new phase and to step up the fight against the use of tobacco in the Region.

The resolutions adopted in this regard by WHO, EURO, public health associations, professional organizations, and many others reveal, on the one hand, clear political purpose, and on the other, the will to join together in efforts to attain a tobacco-free world by the year 2000.

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