

Special Theme – Tobacco

Building the evidence base for global tobacco control

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The tobacco control movement needs a global information system permitting routine monitoring of the tobacco trade, tobacco farming, the tobacco industry, the prevalence of tobacco use, associated mortality, and national resources for combating tobacco. The Tobacco Control Country Profiles database, a data collection initiative led by the American Cancer Society in collaboration with WHO and the Centers for Disease Control and Prevention, represents the first step in the development of such a system. Baseline data on several indicators of tobacco use were obtained from 191 Member States of WHO, two Associate Members, Hong Kong Special Administrative Region of China (Hong Kong SAR), China (Province of Taiwan) and the West Bank and Gaza Strip. The methods used to compile the data are described in the present paper.

Selected indicators from the database were analysed in order to demonstrate the potential utility and value of data derived from an information system devoted to tobacco control. The analyses covered gender-specific smoking prevalence by WHO Region, per capita cigarette consumption by Human Development Index (HDI) category, and average real annual percentage changes in cigarette prices between 1990 and 1999 for selected countries in each category. In 1998, men were almost four times more likely than women to be smokers. The prevalence of smoking among men was highest in the Western Pacific Region. The differential in gender-specific smoking prevalence was narrowest in the Region of the Americas and the European Region. It was wider in the South-East Asia Region and the Western Pacific Region. The lowest and highest per capita consumption of manufactured cigarettes occurred in the lowest and highest HDI categories respectively. In the medium HDI category, China's growing cigarette consumption after 1975 had a major bearing on the rise in per capita consumption. Cigarette price trends suggest that there is considerable scope for increasing taxes on tobacco products, particularly in low or medium HDI countries. The implications of the findings for future tobacco control efforts are discussed, as are issues surrounding the quality of available data, priorities for future data collection and the need to maintain and improve the information system in order to support such efforts.

Keywords: smoking, statistics; smoking, epidemiology; tobacco, statistics; prevalence; commerce; databases, factual, utilization; information.

Voir page 889 le résumé en français. En la página 889 figura un resumen en español.

Introduction

It has been estimated that some three million deaths are attributable to smoking annually and that the number could rise to ten million within 30 to 40 years (1). Effective action against tobacco requires countries to understand the magnitude of the adverse effects of smoking on their populations. As country representatives negotiate WHO's Framework Convention on Tobacco Control, the need for reliable and timely data on tobacco and its use is greater than ever before. The effects of tobacco use could be

monitored through a global system routinely assembling information on the tobacco trade, tobacco farming, the tobacco industry, the prevalence of tobacco use, associated mortality, and national resources for combating tobacco. Anticipating the demand for a global information system to support new tobacco control efforts, WHO and the Centers for Disease Control and Prevention initiated the development of the National Tobacco Information Online System (known provisionally as NATIONS) in 1998. The baseline data for this system were collected for the Tobacco Control Country Profiles (TCCP) project, led by the American Cancer Society. The project has produced a monograph to be presented at the 11th World Conference on Tobacco or Health (Chicago, 6–11 August 2000).

In order to demonstrate the potential utility of the data available from the TCCP project and later from NATIONS, we have analysed gender-specific smoking prevalence, per capita cigarette consumption, and changes in cigarette prices. The analyses illustrate the type of comparison that can easily be made between regions and countries by means of data from

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the TCCP project, which represents the first step in the development of a global tobacco information system. In addition, we highlight issues surrounding the quality of available data, priorities for future data collection, and the need to maintain and improve the system in order to support tobacco control efforts.

Methods

For analyses of smoking prevalence we categorized 191 Member States of WHO, two Associate Members, Hong Kong SAR, China (Province of Taiwan) and the West Bank and Gaza Strip, thus allowing comparison with previous studies conducted by WHO. For analyses of manufactured cigarette consumption we categorized countries according to the Human Development Index (HDI) (2), whereby 174 countries are placed in high, medium or low categories based on life expectancy, educational attainment and income, giving a better measure of basic human capabilities or deprivation than income alone. This made it possible to examine how manufactured cigarette consumption varied with basic standards of living.

Country-specific statistics on smoking prevalence in the TCCP database were obtained through Medline literature searches, personal contacts with investigators and nongovernmental organizations engaged in tobacco control, and reports from health ministries, national statistical offices and WHO country representatives. The minimum inclusion criteria for a survey were the following items of information: date of the survey or its publication; characteristics of respondents (age and sex distribution); a description of sampling and data collection methods; and the questions used in assessing smoking behaviour.

When several studies from the same country met these criteria they were compared with respect to geographical coverage, dates, sample sizes, response rates and methods. Wherever different sources yielded contradictory data on prevalence, historical data were reviewed and experts working in the country were consulted. The most recent and representative studies on adult smoking prevalence were included.

Regional estimates of smoking prevalence were derived on the assumption that all studies reported current daily and occasional smoking among persons aged 15 years and older and that they reflected the smoking statuses of the populations in 1998. The gender-specific prevalence estimates for each country were weighted by the size of the male and female populations aged 15 years and above. The values were averaged so as to obtain WHO weighted regional prevalence estimates. Each of these was assumed to apply to an entire WHO region. The number of smokers in each region was estimated by multiplying the prevalence by the total population aged 15 years and above.

Data on per capita cigarette consumption in the TCCP were derived from production, import and export data in several electronic databases and national

statistical yearbooks available for public scrutiny. Statistics on cigarette imports, exports and production were obtained from the United Nations Statistical Division's Commodity Trade Statistics, the Industrial Commodity Production Statistics databases, the United States Department of Agriculture, and the Food and Agricultural database.¹ For countries where these data were unavailable, figures from national statistical agencies and private research firms were used.

Cigarette consumption in each country was calculated as *production plus imports minus exports*, using a three-year moving average for the years 1975 and 1985. For high development countries, consumption was also calculated for 1995, a year in which trade and production data were not available for most countries in the medium and low development categories. In the medium development category, consumption was calculated for 1994, and in the low development category it was calculated for 1991. Average per capita consumption was estimated within each HDI category by combining the country-level consumption figures and dividing by the population aged 15 years and above. Adult per capita cigarette consumption in the medium development category is presented both including and excluding China and is calculated separately for China.

Data on cigarette prices, reflecting prices in the autumns of 1990 and 1999 unless otherwise noted, are presented by HDI category in US\$ on the basis of values in local currencies and exchange rates in force when surveys were conducted (price and exchange rate data were obtained from the Economist Intelligence Unit). For countries where prices were sampled in more than one city, averages of all the city prices were calculated. Average annual real percentage changes in price between 1990 and 1999 were calculated using the percentage difference in local currency prices while taking into account or discounting for inflation. These calculations were facilitated by creating an inflation index based on estimates provided by the Economist Intelligence Unit.

Results

Prevalence of smoking

Data on smoking prevalence were available from countries with populations representing 55.4% of the African Region, 96.3% of the Region of the Americas, 88.7% of the Eastern Mediterranean Region, 88.8% of the European Region, 96.9% of the South-East Asia Region and 99.3% of the Western Pacific Region (Table 1).

Men were almost four times as likely to smoke as women, yet 23% of females were smokers in the Region of the Americas and 23.4% were smokers in the

¹ The following product codes were used to identify data for analysis in each of the sources: code 1222, COMTRADE Standard International Trade Classification (Revision 2); code 3140-07, UNSD Production International Standard Industrial Classification of all Economic Activities (Revision 2); code 828, FAOSTAT.

European Region. Smoking prevalence among men was highest in the Western Pacific Region and lowest in the Eastern Mediterranean Region. Among women, smoking prevalence was highest in the European Region and lowest in the Western Pacific Region. There were about 1.235 billion adult smokers in a total world population of 5.926 billion (US Central Intelligence Agency's estimate of the world's population in 1998). On the assumption that there will be no change in the global prevalence of smoking, it can be expected that the number of cigarette adult smokers will reach 1.278 billion this year (2000) and 1.671 billion in 2020 because of changes in the world population (3).

Per capita consumption

The percentages of populations in the calculations of per capita consumption varied by HDI category and by year (Table 2). Fig. 1 presents estimates of per capita cigarette consumption for over 15-year-olds in 1975, 1985 and 1995 by HDI category.

The estimates for countries in the medium category are presented with and without China and separately for China. The highest per capita consumption of manufactured cigarettes occurred in the high development category and decreased between 1975 and 1995. Countries in the medium development category experienced a progressive 46% increase in consumption between 1975 and 1994, reaching 1139 cigarettes per capita in 1994. China experienced an increase in per capita consumption at a greater rate than that of the medium development category as a whole from 1975 to 1994. In total, China experienced a 128% increase in per capita consumption between 1975 and 1994. Without China's contribution to the medium development category, its per capita consumption would have decreased slightly between 1985 and 1994. Per capita cigarette consumption in the low development category remained fairly constant from 1975 to 1991.

Price of cigarettes

Table 3 presents trends in cigarette prices in various countries. Substantial increases in real cigarette

prices, adjusted for inflation, occurred in only France, South Africa, the United Kingdom, and the USA. No increase or a substantial decrease in cigarette prices occurred in more than half the countries listed. This was especially true of imported brands.

Discussion

Using the TCCP database to support tobacco control

The analyses presented above demonstrate the utility of the data available in the database for supporting programme and policy planning for tobacco control. For instance, analyses of smoking prevalence and cigarette consumption can assist in identifying the countries with the greatest need for resources devoted to tobacco control efforts. Globally, some 30% of adults were estimated to be smokers in 1998. By 2020 the number of smokers will have increased by 35% if global smoking prevalence remains the same. Per capita cigarette consumption trends over 20 years, however, demonstrate the changing nature of the pandemic. If consumption trends continue as they have been since 1975, an increase in cigarette consumption will occur in economically developing countries and a gradual decrease will occur in economically developed countries. The countries with the greatest expansion in the cigarette market will be those with the smallest resources available for tackling the health problems associated with tobacco use. While these analyses used very broad economic categories, the TCCP database allows comparisons between countries, geographical regions or other groupings which might lend support to tobacco control initiatives.

Analyses of average real percentage changes in cigarette prices help to identify policy areas in which national governments can improve their efforts in tobacco control. The cigarette price trends in our study suggest that there is scope for increasing taxes on tobacco products, most notably in countries belonging to the low and medium HDI categories,

Table 1. Gender-specific smoking prevalence by WHO Region, 1998

Region	Weighted prevalence estimate (%)			Estimated numbers of smokers (millions)			Number of studies	% of total population represented by studies
	Male	Female	Total	Male	Female	Total		
Africa	36.2	9.4	22.9	59.6391	15.1086	74.7477	15	55.4
The Americas	34.7	23.0	28.7	98.0754	67.8454	165.9209	30	96.3
Eastern Mediterranean	34.2	8.7	21.8	49.7699	11.9266	61.6965	17	88.7
Europe	43.5	23.4	33.0	144.3112	84.6990	229.0102	40	88.8
South-East Asia	48.2	8.2	28.6	242.6307	39.4710	282.1017	6	96.9
Western Pacific	62.3	5.8	34.4	387.2792	34.9310	422.2101	23	99.3
Total	47.9	12.4	30.2	981.7055	253.9816	1235.687	131	92.3

Sources: American Cancer Society and World Health Organization, TCCP database.

Note: Several small countries for which population figures were not available did not contribute their population weight to the analysis.

where cigarette prices have failed to keep up with increases in the general price level of goods and services. Cigarettes were more affordable in 1999 than at the beginning of the decade. Increasing the price of tobacco products is arguably one of the most effective means of curbing their consumption (4). On average, a price increase of 10% can be expected to reduce the demand for cigarettes by about 4% in high-income countries and by about 8% in low-income and middle-income countries (5). The young (6, 7) and the poor (8, 9) tend to be more responsive to price changes than other groups of people. Analyses using data from the TCCP database, and later from NATIONS, can provide evidence in support of the World Bank's tobacco tax and price increase strategy and related policies.

Using the TCCP database for needs assessment

In addition to providing an evidence base for tobacco control, the database identified disparities between countries in regard to the amount and quality of data available for analysis. This indicated priority areas for future data collection and tobacco control surveillance efforts. For instance, smoking prevalence statistics were not found for 33% of the countries, provinces and territories. The prevalence of smoking in the African Region has probably been influenced by the lack of data because only half the Regional population contributed to the estimate, whereas the data for the other regions cover more than 85% of their populations. Compared to previously reported statistics the representativeness of Africa's regional smoking prevalence data has improved. In 1997, for example, WHO's Tobacco or Health Programme analysed regional smoking prevalence in the early 1990s (10). The new estimate covers 22% more of the African Region's population. The validity of estimates in developing regions can be expected to improve with increased access to country-specific data and increased capacity and resources for monitoring risk factors. Standardized survey methods would also increase the utility of regional estimates. In all regions there were variations between countries in the survey methods employed, and regional estimates were affected by the comparability of country-specific data.

The TCCP database made it possible to see ways in which consumption estimates could improve through standard reporting of country-level data to an information system. The accuracy of most per capita consumption estimates is limited by the information *not* included in each country's official trade and production statistics. In countries where the preferred cigarettes are not of the manufactured kind the TCCP data underestimate consumption. Country-level data related to the consumption of roll-your-own, bidi and kretek cigarettes would usefully supplement information on manufactured cigarettes from databases of the United Nations and the United States Department of Agriculture. This is particularly

Table 2. Population coverage by Human Development Index category in 1975, 1985 and 1995

Level of human development	1975	1985	1995
High	97.8%	97.3%	87.6%
Medium	83.1%	85.9%	85.5% ^a
Low	77.2%	81.6%	73.7% ^b

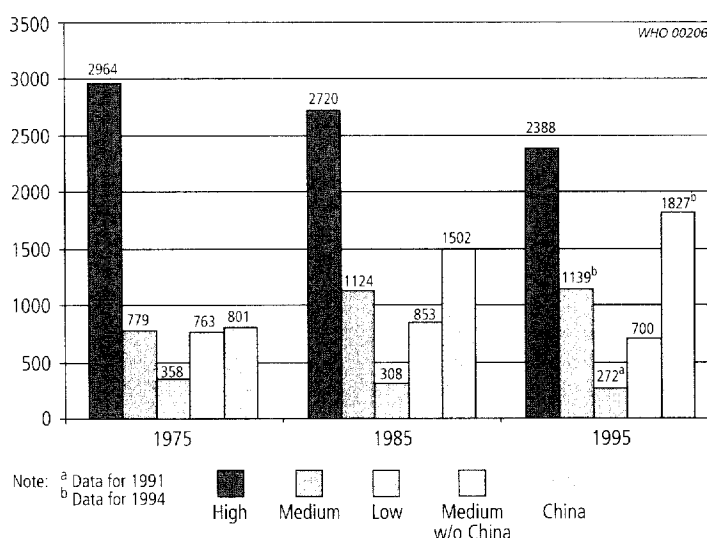
^a Population coverage in 1994.

^b Population coverage in 1991.

Source: American Cancer Society and World Health Organization, TCCP database.

Note: Coverage represents the percentage of the total population within each category that also reported consumption figures. Within each level of human development no population figures were available for certain countries, and these were not taken into account in the above calculations.

Fig. 1. Annual per capita consumption by Human Development Index category (three-year moving average)



Source: American Cancer Society and World Health Organization, TCCP database.

relevant to the Eastern Mediterranean Region and Central and Southern Asia, where tobacco consumption is likely to be underestimated if traditional forms of use are excluded from the calculations.

Routine data collection is less likely to provide the means of overcoming certain additional obstacles to estimating consumption, indicated below with a view to aiding the interpretation of TCCP data.

The calculations we used did not account for factors that increase or decrease the true volume of trade and production, such as smuggling and tax exemption. The consumption formula does not account for cigarette stocks held in reserve by cigarette wholesalers and retailers. This factor only becomes apparent if a very large net change in stock volume occurs from one year to the next. The per capita consumption calculation includes only persons aged 15 years and older in its denominator and thus does not account for younger smokers. The importance of this factor is greatest in certain developing countries where the largest proportion of the population consists of people under 15 years of age.

Table 3. Cigarette prices in selected countries by human development level: 1990–99

Country	Marlboro (US\$ per pack of 20 cigarettes)			Local brand (US\$ per pack of 20 cigarettes)		
	1990	1999	Average real annual % change	1990	1999	Average real annual % change
High human development						
Canada	3.85	3.50	-0.18	3.40	2.67	-1.67
Czech Republic	1.78	1.29	-5.66	1.05	1.15	-2.88
Denmark	4.64	4.37	-0.69	4.55	4.30	-0.67
France	1.98	3.26	7.40	1.20	2.76	14.86
Germany	2.86	2.87	-0.19	2.75	2.79	-0.09
Japan	1.75	2.58	1.01	1.61	2.30	0.70
New Zealand	2.63	3.81	4.78	2.67	3.62	3.78
Poland	1.34	1.21	-5.90	0.26	0.99	10.55
Sweden	3.90	4.32	3.20	3.72	4.20	3.45
United Kingdom	3.40	6.27	7.46	3.40	6.27	7.46
United States of America	1.74	3.16	4.72	1.71	3.04	4.39
Medium human development						
China	1.49	1.83	0.55	0.96	1.73	5.97
Costa Rica	0.89	0.69	-4.74	0.70	0.64	-3.63
Egypt	1.47	1.16	-6.52	1.10	1.16	-4.99
Hungary	1.46	1.01	-6.03	0.52	0.89	1.43
Kenya	2.15	1.59	-3.09	0.65	0.80	2.13
Mexico	0.52	1.07	0.16	0.45	0.86	-0.70
Malaysia	0.96	1.11	1.74	0.89	0.76	-1.50
Morocco	2.21	2.84	-0.76	0.98	1.45	0.78
South Africa	1.07	1.37	4.45	0.68	1.37	13.48
Thailand	1.16	1.09	-0.97	0.50	0.73	4.67
Turkey	1.66	1.32	-6.06	0.92	0.99	-4.44
Venezuela	0.46	1.44	3.06	0.46	1.28	1.49
Low human development						
Bangladesh	1.41	1.37	-1.25	1.13	0.85	-3.50
Côte d'Ivoire	1.87	0.94	-4.72	1.54	0.78	-4.67
Nigeria	1.26	0.83	-4.13	0.44	0.83	8.83
Senegal	1.15	0.80	-1.07	0.77	0.32	-5.09
Zambia	0.89 ^a	2.03	-12.09	0.74 ^a	0.64	-14.93

^a 1993.

Source: Economist Intelligence Unit; calculations made by World Health Organization.

Both the wide range of analyses possible using TCCP data and the limitations of these data indicate a need for standardized data collection techniques at the country level and greater access to data by researchers working outside each country. In the future, NATIONS can be expected to increase access to data. The system will integrate information systems and data sources electronically to facilitate the tracking of country-specific information across a wide range of indicators, including smoking prevalence and tobacco consumption, laws and regulations, morbidity and mortality, industrial organizations, tobacco economics, and programmatic interventions against tobacco use. NATIONS will report time-trend data for each indicator and will update them periodically. In this way, the evidence base for tracking the progress of tobacco control policies will be increased and the common electronic framework necessary for storing and updating data, making information easily acces-

sible to researchers, tobacco control advocates, and policy-makers over the Internet will be provided.

Conclusion

The results of these analyses using data from the TCCP database demonstrate the potential applications of an information system devoted to tobacco control. Because TCCP compiled data on a wide variety of indicators, from employment in tobacco manufacturing to pharmaceutical treatments for tobacco dependence, future analyses are not limited to the type of prevalence, tobacco consumption and price comparisons presented here. Nor are they restricted to groupings by WHO Region and HDI level. Unfortunately, neither TCCP nor NATIONS can directly meet the need for standardized survey and data collection methods at country level. This

requirement is best tackled through capacity-building at local level with leadership from WHO and others in accordance with defined principles (11). The establishment of a permanent electronic framework for data management and retrieval, however, may

provide an incentive for improving and increasing tobacco control efforts by making the results of independent research available to the global tobacco control community. ■

Résumé

L'information au service de la lutte antitabac

Le mouvement de lutte antitabac a besoin d'un système d'information mondial sur la culture et le commerce du tabac, l'industrie du tabac, la consommation de tabac et la mortalité qui lui est associée, ainsi que sur les moyens existant au plan national pour la lutte contre le tabac. La base de données par pays (Tobacco Control Country Profiles – TCCP) mise en place par l'American Cancer Society en collaboration avec l'OMS et les Centers for Disease Control and Prevention constitue une première étape vers l'établissement d'un tel système. Des données de base sur une série d'indicateurs relatifs à la consommation de tabac ont été recueillies auprès de 191 Etats Membres de l'OMS, de deux Etats Membres associés, de deux provinces de Chine et de trois territoires occupés. Le présent article décrit les méthodes utilisées pour synthétiser les informations.

Il analyse également les indicateurs employés pour les TCCP, de façon à mettre en évidence l'utilité et la valeur potentielles des données fournies par un système d'information spécifiquement voué à la lutte antitabac. Cette analyse porte sur la prévalence du tabagisme par sexe et par Région OMS, sur la consommation de cigarettes au regard de l'indicateur du développement humain (HDI) et sur l'évolution annuelle moyenne en valeur réelle du prix des cigarettes entre 1990 et 1999. L'article met également en avant certains problèmes concernant la qualité des données et la nécessité de maintenir et d'améliorer le système d'information afin de faciliter les efforts de lutte contre le tabagisme.

Globalement, les hommes étaient près de quatre fois plus nombreux que les femmes à fumer en 1998. C'est dans la Région du Pacifique occidental que le pourcentage d'hommes consommant du tabac était le plus élevé. S'agissant de la proportion respective de fumeurs et de fumeuses, c'est dans les Amériques et en Europe que l'écart entre les hommes et les femmes était le plus faible, et dans les Régions de l'Asie du Sud-Est et du Pacifique occidental qu'il était le plus marqué. En ce qui concerne les cigarettes industrielles, la consommation la plus faible et la plus élevée par habitant coïncidaient avec l'indicateur le plus faible et, respectivement, le plus élevé du développement humain. Dans la catégorie moyenne, l'augmentation globale de la consommation enregistrée depuis 1975 en Chine correspondait à une augmentation par habitant. Quant au prix des cigarettes, son augmentation était inférieure à la moyenne du renchérissement des biens et services, ce qui fait que les

cigarettes étaient relativement plus abordables en 1999 qu'en 1990. Ces indications confirment qu'il existe une importante marge potentielle d'augmentation des taxes sur les produits du tabac, notamment dans les pays où l'indicateur du développement humain est faible à moyen.

L'analyse met également en lumière la contribution potentielle de la base de données TCCP au développement des programmes et politiques de lutte antitabac. Ainsi, les statistiques de la consommation de cigarettes permettent d'identifier les pays où le besoin de ressources dans ce domaine est le plus aigu. Les pays où le marché de la cigarette connaît la plus forte expansion sont à l'évidence ceux qui disposent des ressources les plus faibles pour faire face aux problèmes associés au tabac. De même, l'analyse de l'évolution du prix des cigarettes et autres données connexes permet de définir des domaines d'intervention dans lesquels les gouvernements pourraient renforcer leur contribution à la lutte antitabac, par exemple en augmentant le prix des cigarettes afin de faire baisser la consommation.

Le projet TCCP a révélé des disparités entre les pays en ce qui concerne le volume et la qualité des données disponibles pour l'analyse et permis d'identifier un certain nombre de priorités pour les futures activités de collecte de données et de surveillance. Ainsi, on n'a pas pu établir la prévalence de la consommation de tabac dans 33 % des pays, provinces et territoires occupés englobés dans l'étude. Dans la Région africaine, cette indication a été biaisée par le fait que seule la moitié de la population a été prise en compte dans les estimations. Les estimations relatives à la consommation de cigarettes pourraient être améliorées grâce à des systèmes de collecte de données standardisés au plan national. Dans les pays où les cigarettes les plus consommées ne sont pas les cigarettes industrielles, les données TCCP sous-estiment la consommation des populations concernées. Des statistiques sur la consommation des cigarettes roulées, des *bidis* et des cigarettes *kretek* permettraient de dresser un tableau plus complet que les données limitées aux cigarettes industrielles.

Le large éventail d'analyses autorisées par les données TCCP et les limites de ces mêmes informations confirment la nécessité de techniques de collecte des données normalisées au plan national et d'un meilleur accès aux données par des chercheurs travaillant en dehors des pays concernés.

Resumen

Acopio de datos estadísticos para la lucha antitabáquica mundial

El movimiento contra el tabaco necesita un sistema mundial de información para vigilar regularmente el

comercio, el cultivo y la industria de ese producto, así como la prevalencia del hábito de fumar, la mortalidad

asociada y los recursos nacionales para la lucha antitabáquica. La base de datos sobre las características de los países en relación con la lucha antitabáquica, una iniciativa de recopilación de datos coordinada por la Asociación Estadounidense de Lucha contra el Cáncer en colaboración con la OMS y los Centros para el Control y la Prevención de Enfermedades, representa el primer paso en el desarrollo de dicho sistema. Se obtuvieron datos comparativos sobre varios indicadores del consumo de tabaco de 191 Estados Miembros de la OMS, dos Estados Miembros Asociados, dos provincias de China y tres territorios ocupados. Los métodos utilizados para compilar los datos se describen en el presente documento.

A fin de demostrar la utilidad y el valor potenciales de los datos derivados de un sistema de información dedicado a la lucha antitabáquica, se analizan los indicadores arriba mencionados. Los análisis versan sobre la prevalencia de tabaquismo por sexos por región de la OMS, el consumo de cigarrillos per cápita por categoría del índice de desarrollo humano (IDH) y los cambios porcentuales anuales reales promedio de los precios de los cigarrillos entre 1990 y 1999. Se destacan temas relacionados con la calidad de los datos y la necesidad de mantener y mejorar el sistema de información para respaldar la lucha antitabáquica.

A nivel mundial, los hombres tenían una probabilidad de fumar casi cuatro veces mayor que las mujeres en 1998, y la prevalencia más alta de tabaquismo masculino se registró en la Región del Pacífico Occidental. Las diferencias de prevalencia de tabaquismo por sexos eran menores en la Región de las Américas y la Región de Europa y mayores en la Región de Asia Sudoriental y la Región del Pacífico Occidental. Con respecto a los cigarrillos elaborados, el consumo per cápita más bajo y el más alto se registraron en las categorías más baja y más alta, respectivamente, del índice de desarrollo humano. En la categoría de IDH medio, el consumo creciente de cigarrillos en China después de 1975 tuvo una influencia predominante en el aumento del consumo per cápita. Los precios de los cigarrillos no aumentaron tan rápidamente como el nivel general de los precios de los bienes y servicios, y en consecuencia los cigarrillos fueron más asequibles en 1999 que en 1990. Estos resultados indican que hay un

margen considerable para aumentar los impuestos que gravan los productos del tabaco, particularmente en los países de IDH bajo y medio.

Los análisis muestran el potencial que encierra la base de datos sobre las características de los países para apoyar la planificación de programas y políticas. Por ejemplo, los análisis del consumo de cigarrillos pueden contribuir a determinar en qué países se necesitan muchos recursos para la lucha antitabáquica. Los países con mayor expansión del mercado de los cigarrillos son evidentemente aquellos que tienen menos recursos disponibles para abordar los problemas asociados con el tabaco. El estudio de la variación porcentual de los precios de los cigarrillos y los análisis conexos pueden ayudar a identificar las esferas normativas en las que los gobiernos pueden mejorar sus esfuerzos de lucha antitabáquica, por ejemplo aumentando el precio de los cigarrillos como medio para reducir el consumo.

El proyecto reveló disparidades entre los países en cuanto a la cantidad y la calidad de los datos disponibles para efectuar análisis y mostró esferas prioritarias para los fines futuros de la recopilación de datos y los esfuerzos de vigilancia. No se encontraron estadísticas sobre la prevalencia del tabaquismo en un 33% de los países, provincias y territorios ocupados considerados. El análisis de la prevalencia del tabaquismo en la Región de África estuvo muy determinado por la falta de datos, ya que las estimaciones se realizaron sólo con la mitad de los habitantes de la Región. Los cálculos sobre el consumo de cigarrillos podrían mejorar mediante una notificación normalizada de los datos sobre los países. En los países donde los cigarrillos preferidos no son los elaborados, los datos que aporta esta base sobre consumo de cigarrillos por la población dan lugar a subestimaciones. Si se reunieran datos sobre el consumo de cigarrillos confeccionados manualmente y de cigarrillos de bidi y de kretek, se podría obtener un panorama más completo que el que ofrecen los datos sobre consumo de cigarrillos elaborados.

La amplia variedad de análisis posibles a partir de los datos de la base sobre las características de los países y las limitaciones de estos datos muestran la necesidad de técnicas estandarizadas de recopilación de datos a nivel de país y de un mejor acceso a los datos para los investigadores que trabajan fuera de determinados países.

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