

Global Tobacco Surveillance System (GTSS):

Purpose, Production, and Potential

Global Tobacco Surveillance System Collaborating Group

ABSTRACT: *The World Health Organization (WHO), Centers for Disease Control and Prevention (CDC), and Canadian Public Health Association (CPHA) developed the Global Tobacco Surveillance System (GTSS) to assist all 192 WHO Member States in collecting data on youth and adult tobacco use. The flexible GTSS system includes common data items but allows countries to include important unique information at their discretion. It uses a common survey methodology, similar field procedures for data collection, and similar data management and processing techniques. The GTSS includes collection of data through three surveys: the Global Youth Tobacco Survey (GYTS) for youth, and the Global School Personnel Survey (GSPS) and the Global Health Professional Survey (GHPS) for adults. GTSS data potentially can be applied in four ways. First, countries and research partners can disseminate data through publications, presentations, and an active GTSS web site. Second, countries can use GTSS data to inform politicians about the tobacco problem in their country, leading to new policy decisions to prevent and control tobacco use. Third, GTSS can provide countries with valuable feedback to evaluate and improve Country National Action Plans or develop new plans. Fourth, in response to the WHO FCTC call for countries to use consistent methods and procedures in their surveillance efforts, GTSS offers such consistency in sampling procedures, core questionnaire items, training in field procedures, and analysis of data across all survey sites. The GTSS represents the most comprehensive tobacco surveillance system ever developed and implemented. As an example, this paper describes development of the GYTS and discusses potential uses of the data. Sample data were drawn from 38 sites in 24 countries in the African Region, 82 sites in 35 countries in the Americas Region, 20 sites in 17 countries and the Gaza Strip/West Bank region in the Eastern Mediterranean Region, 25 sites in 22 countries in the European Region, 34 sites in six countries in the Southeast Asia Region, and 25 sites in 14 countries in the Western Pacific Region. (J Sch Health. 2005;75(1):15-24)*

Public health surveillance involves “the ongoing systematic collection, analysis, and interpretation of outcome-specific data for use in the planning, implementation, and evaluation of public health practice.”¹ In late 1998, the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) convened a meeting of tobacco control experts to discuss the need for a global tobacco surveillance system. Two issues emerged from the meeting. First, adult and youth behavior surveillance systems exist in many developed countries, and many of these systems collect information on tobacco. However, few developing countries support such surveillance systems, and little information exists about tobacco use by their youth. Second, existing surveillance systems lack common methodology, lack consistent questionnaire structure and wording, and address different populations of interest. These differences make comparisons across countries impossible.

To bridge this information gap and to promote tobacco control at the global level, WHO, CDC, and the Canadian Public Health Association (CPHA) developed the Global Tobacco Surveillance System (GTSS) to assist all 192 WHO Member States in collecting data on youth and adult tobacco use. The GTSS provides a flexible system that includes common data items but allows countries to include important unique information, at their discretion. It also uses a common survey methodology, similar field procedures for data collection, and similar data management and processing techniques.²

The GTSS includes collection of data through three surveys: the Global Youth Tobacco Survey (GYTS) for youth, and the Global School Personnel Survey (GSPS) and the Global Health Professional Survey (GHPS) for adults. One survey, the GYTS, provides an example of useful data available to child and adolescent health professionals worldwide.

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GLOBAL YOUTH TOBACCO SURVEY

Implementation

In March 1999, 11 countries (Barbados, China, Fiji, Jordan, Poland, Russian Federation, South Africa, Sri Lanka, Ukraine, Venezuela, and Zimbabwe) accepted the challenge of pilot testing the first GYTS. All 11 countries completed successful GYTSs during 1999. After this initial success, many countries asked WHO and CDC for assistance in participating in the GYTS. As of early 2004, 126 of the 192 WHO Member States had completed the GYTS, 19 others are currently in the field, and 13 new countries will be trained during 2004-2005. Twenty-five countries have completed repeat GYTSs, and 17 others are in the field with their repeat. All six WHO regions and the countries within each of the regions have realized the importance of the GYTS and the need to establish the GYTS as the cornerstone of the GTSS.

Features

The GYTS provides systematic global surveillance of youth tobacco use. Countries can use the GYTS to enhance capacity to monitor tobacco use among youth; guide development, implementation, and evaluation of a national tobacco prevention and control program (ie, Country National Action Plans); and allow comparison of tobacco-related data at the national, regional, and global levels.

The GYTS uses a standardized methodology for constructing the sampling frame, selecting schools and classes, preparing questionnaires, carrying out field procedures, and processing data. The GYTS includes data on prevalence of cigarette and other tobacco use, perceptions and attitudes about tobacco, access and availability of tobacco products, exposure to secondhand smoke, school curricula, media and advertising, and smoking cessation. By capturing factors important in assessing a country's tobacco epidemic and tobacco-related issues, and by administering the survey every three to four years, GYTS data can stimulate development and evaluation of compre-

hensive tobacco control programs and provide a means of assessing progress in meeting program goals.

The GYTS includes three components: country training, analysis, and program development. Research coordinators nominated by the national government may come from a ministry, a health institute, a nongovernmental organization, or an academic institution. To ensure standardized

implementation procedures, training workshops for country research coordinators are held in each of the six WHO Regions including the African Region (AFR), Americas Region (AMR), Eastern Mediterranean Region (EMR), European Region (EUR), Southeast Asia Region (SEAR), and Western Pacific Region (WPR). Following data collection, an analysis workshop assists research coordinators in

Global Tobacco Surveillance System (GTSS) Collaborating Group

Agencies supporting the GYTS include the following.

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GYTS was coordinated through WHO Regions. Field work in each country was coordinated by the following persons.

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the analysis and interpretation of their GYTS data. The workshop includes training in use of EpiInfo software and writing research reports. After completing the country reports, a program development workshop provides leadership in developing effective, evidence-based tobacco prevention and control programs, or Country National Action Plans.

Methods

The GYTS uses a two-stage cluster sample design that produces representative samples of students in grades associated with ages 13-15 years. The sampling frame includes all schools containing any of the identified grades. At the first stage, the probability of a school being selected is proportional to the number of students enrolled in the spec-

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Global Tobacco Surveillance System (GTSS) Collaborating Group

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ified grades. At the second stage, classes within the selected schools are randomly selected. All students in the selected classes attending school the day the survey is administered are eligible to participate.

A weighting factor is applied to each student record to adjust for nonresponse (by school, class, and student) and

variation in the probability of selection at the school, class, and student levels. A final adjustment sums the weights by grade and gender to the population of school children in the selected grades in each sample site. SUDAAN, a software package for statistical analysis of correlated data, computes 95% confidence intervals.⁴ Differences between prevalence

Table 1
Global Youth Tobacco Survey (GYTS) Measures
by WHO Framework Convention on Tobacco Control (FCTC) Article and WHO Region

WHO FCTC Articles/ GYTS Measures	Total	Africa Region	The Americas Region	Eastern Mediterranean Region	European Region	Southeast Asia Region	Western Pacific Region
Article 21:							
Prevalence							
Ever smoked cigarettes	26.1%	22.9%	49.4%	14.8%	44.1%	9.9%	30.3%
Ever smokers who initiated smoking before age 10	23.1%	24.9%	20.4%	27.8%	29.2%	19.0%	18.3%
Current cigarette smokers	9.8%	9.8%	18.4%	4.1%	16.2%	4.5%	11.8%
Currently use other tobacco products	11.8%	11.3%	12.5%	13.5%	6.2%	12.9%	7.0%
Never smokers likely to initiate smoking next year	17.0%	16.3%	26.1%	11.0%	17.9%	16.6%	11.3%
Article 8:							
Exposure to Secondhand Smoke							
Exposed to smoke from others at home	42.7%	30.3%	43.1%	39.1%	75.5%	37.5%	43.2%
Exposed to smoke from others in public places	53.2%	45.2%	58.5%	47.4%	83.1%	49.6%	45.4%
Think smoking should be banned from public places	78.0%	57.1%	76.9%	86.6%	83.3%	75.8%	82.1%
Article 12:							
School							
Taught dangers of smoking	52.5%	57.4%	46.0%	42.7%	57.5%	52.8%	69.8%
Discussed reasons people their age smoke	35.7%	38.0%	30.8%	32.4%	37.2%	34.8%	48.8%
Taught about the effects of smoking	46.5%	57.4%	39.6%	34.3%	48.6%	48.5%	60.3%
Article 13:							
Media and Advertising							
Saw actors smoking on TV, in videos, or in movies in past month	93.2%	87.4%	92.8%	95.6%	92.0%	96.3%	94.3%
Saw ads for cigarettes on billboards in past month	56.5%	66.8%	81.4%	62.3%	56.0%	43.2%	81.1%
Saw ads for cigarettes in newspapers or magazines in past month	48.8%	66.1%	74.7%	60.8%	54.7%	30.3%	69.4%
Saw ads for cigarettes at sporting events in past month	40.4%	66.4%	79.3%	60.6%	64.4%	14.6%	73.4%
Have an object with a cigarette brand logo on it	17.3%	18.6%	19.2%	15.9%	16.7%	10.9%	14.3%

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estimates are considered statistically significant if the 95% confidence intervals do not overlap.

The GYTS findings are subject to at least three limitations. First, because the sample of youth surveyed was limited to those who attend school, it may not be representative of all youth aged 13-15 years. However, in most countries, the majority of students in this age group attend regular, private, or technical schools.⁷ Second, the data apply only to youth in school the day the survey was administered and who actually participated in the survey. However, the median student response rate was 88.2%, and only five of 393 sites reported a school response rate less than 80%. Third, data are based on self-reports from students who may under-report or over-report their behavior or attitudes. Though the extent of potential reporting bias cannot be determined, responses to questions about cigarette smoking and other tobacco use show good test-retest reliability.⁸

Since 1999, GYTS has been conducted in 126 of 192 WHO Member States. The sample GYTS data reported here represent weighted estimates for each of the six WHO Regions.³ Data were processed by CDC and approved by each country's research coordinator. Data were collected at 38 sites in 24 countries in AFR, 82 sites in 35 countries in

AMR, 20 sites in 17 countries and the Gaza Strip/West Bank region in EMR, 25 sites in 22 countries in EUR, 34 sites in six countries in SEAR, and 25 sites in 14 countries in WPR. School response rates ranged from 100% to 68.8% by site, student response rates ranged from 99.7% to 56.9%, and overall response rates ranged from 97.1% to 55.2%. In total, more than 1.7 million students in more than 18,000 schools have completed a GYTS.^{5,6}

Data

Prevalence Rates. Overall, one in five students had ever smoked cigarettes; the rate of having ever smoked was highest in AMR (49.4%) and lowest in SEAR (9.9%) (Table 1). Of the students who had ever smoked cigarettes, almost one-fourth started smoking before the age of 10 years; early initiation was highest in EUR and EMR (29.2% and 27.8%, respectively). Overall, 9.8% of students were current smokers (had smoked a cigarette on at least one day in the past 30 days); the rate of current smoking was highest in AMR (18.4%) and EUR (16.2%). One in 10 (11.8%) students currently used other tobacco products (eg, pipes, water pipes, chewing tobacco, bidis, etc); the rate was highest in EMR (13.5%). Among students who had never

Table 1 (continued from previous page)
Global Youth Tobacco Survey (GYTS) Measures
by WHO Framework Convention on Tobacco Control (FCTC) Article and WHO Region

WHO FCTC Articles/ GYTS Measures	Total	Africa Region	The Americas Region	Eastern Mediterranean Region	European Region	Southeast Asia Region	Western Pacific Region
Article 14:							
Cessation and Dependency							
Current smokers who desire to stop smoking	69.2%	71.2%	69.8%	62.9%	59.8%	71.1%	82.7%
Current smokers who tried to stop during the past year	65.1%	71.5%	57.1%	62.2%	70.9%	73.3%	85.8%
Current smokers who received help to stop smoking	73.9%	73.9%	65.8%	77.1%	63.2%	84.7%	89.6%
Current smokers who have or feel like having a cigarette first thing in the morning	9.0%	15.2%	6.5%	16.0%	10.8%	4.0%	5.3%
Article 16:							
Minor's Access and Availability							
Current smokers who usually buy their cigarettes in a store	38.0%	45.2%	22.3%	38.4%	55.1%	61.6%	54.1%
Current smokers who buy their cigarettes in a store and who were not refused purchase because of their age	65.4%	65.7%	66.9%	75.8%	76.5%	55.7%	52.4%
Have been offered "free" cigarettes by a tobacco company representative	9.8%	12.8%	10.9%	13.4%	8.4%	8.4%	7.4%

smoked cigarettes, 17.0% indicated that they were likely to initiate smoking during the coming year; the rate of likely initiation was highest in AMR and EUR (26.1% and 17.9%, respectively).

Exposure to Secondhand Smoke. More than 40% of students had been exposed to tobacco smoke in their homes, and that figure was more than 75% in EUR (Table 1). Five in 10 students reported that they had been exposed to secondhand tobacco smoke in public places; exposure was highest in EUR (83.1%). Nearly eight in 10 students thought that smoking should be banned from public places (more than three-fourths of students in all regions except AFR, where the percentage was 57.1%).

School Curriculum. In all regions except EMR (42.7%) and AMR (46.0%), more than one-half of the students were taught in school about the dangers of smoking (Table 1). However, only 30% to 40% of students had discussed in class the reasons people their age smoke (48.8% in WPR).

Media and Advertising. Approximately nine in 10 students in all regions reported having seen actors smoke on television, in videos, or in movies during the past month (Table 1). About one-half of the students had seen pro-cigarette ads on billboards (56.5%), in newspapers and magazines (48.8%), or at sporting events (40.4%) in the past month. Exposure on billboards was highest in AMR and WPR (81.4% and 81.1%, respectively). More than six in 10

Table 2
**Global Youth Tobacco Survey (GYTS), Global School Personnel Survey (GSPS),
 and Global Health Professional Survey (GHPS) Measures
 That Can Be Used to Monitor the WHO Framework Convention on Tobacco Control (FCTC)**

WHO FCTC Article	GYTS Measures	GSPS Measures	GHPS Measures
<p>Article 20: Research, surveillance, and exchange of information. 2: Parties shall establish, as appropriate programmes for national, regional, and global surveillance of the magnitude, patterns, determinants and consequences of tobacco consumption and exposure to tobacco smoke. Towards this end, the Parties should integrate tobacco Surveillance programme into national, regional, and global health surveillance programmes so that data are comparable and can be analyzed at the regional and international levels, as appropriate.</p>	<p>GYTS was developed by WHO Headquarters, WHO Regional Officers, CDC, and CPHA in 1999. As of early 2004, 126 of the 192 WHO Member States had completed the GYTS, 19 others are currently in the field, and 13 new countries will be trained during 2004-2005. Twenty-five countries have completed repeat GYTSs, and 17 others are in the field with their repeat.</p>	<p>GSPS was developed by WHO Headquarters, WHO Regional Officers, CDC, and CPHA in 2000. To date, the GSPS has been conducted in 40 countries, the Gaza Strip/West Bank, and 25 states in India.</p>	<p>GHPS is being developed by WHO Headquarters, Regional Officers, CDC, and CPHA and will be pilot tested in each of the six WHO Regions in 2004-2005.</p>
<p>Prevalence Article 21: Reporting and exchange of information. 1: Each Party shall submit to the Conference of the Parties, through the Secretariat, periodic reports on its implementation of this Convention, which should include the following: (d) information on surveillance and research as specified in Article 20 (Research, surveillance, and exchange of information)</p>	<ul style="list-style-type: none"> - Ever smoked cigarettes. - Initiated smoking before age 10. - Current cigarette smoking. - Current other tobacco use. - Never smokers, likely to initiate smoking in the next year. 	<ul style="list-style-type: none"> - Ever smoked cigarettes. - Currently smoke daily or occasionally. - Ever used other tobacco products. - Current use other tobacco products daily or occasionally. 	<ul style="list-style-type: none"> - Ever smoked cigarettes. - Current cigarette smoking. - Current other tobacco use.

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students in AFR, AMR, EMR, and WPR were exposed to pro-cigarette ads in newspapers and magazines. Exposure at sporting events was highest in WPR (73.4%) and AMR (79.3%). Almost one in five students (17.3%) owned an object with a cigarette brand logo on it. This percentage was highest in AMR (19.2%) and was more than 10% in all regions.

Smoking Cessation. Overall, 69.2% of students who were current smokers stated that they desired to stop smoking, and 65.1% indicated that they had tried to stop smoking during the past year but had failed (Table 1). Eight in 10 current smokers in WPR (82.7%) and seven in 10 in AFR (71.2%) and SEAR (71.1%) desired to stop smoking. Seven in 10 current smokers stated that they had received help in

Table 2 (continued from previous page)
**Global Youth Tobacco Survey (GYTS), Global School Personnel Survey (GSPS),
 and Global Health Professional Survey (GHPS) Measures
 That Can Be Used to Monitor the WHO Framework Convention on Tobacco Control (FCTC)**

WHO FCTC Article	GYTS Measures	GSPS Measures	GHPS Measures
<p>Exposure to Secondhand Smoke Article 8: Protection from exposure to tobacco smoke. 2: Each Party shall adopt and implement in areas of existing national jurisdiction as determined by national law and actively promote at other jurisdictional levels the adoption and implementation of effective legislative, executive, administrative, and/or other measures, providing for protection from exposure to tobacco smoke in indoor workplaces, public transport, indoor public places, and, as appropriate, other public places.</p>	<ul style="list-style-type: none"> - Exposed to smoke from others in their home. - Exposed to smoke from others in public places. - Think smoking should be banned from public places. 	<ul style="list-style-type: none"> - Smoke from others annoys them. 	<ul style="list-style-type: none"> - Exposed to smoke from others in their home. - Exposed to smoke from others in public places. - Think smoking should be banned from public places. - Definitely think smoke from others is harmful to them.
<p>School Article 12: Education, communication, training, and public awareness. Each party shall promote and strengthen public awareness of tobacco control issues, using all available communication tools, as appropriate. Towards this end, each Party shall adopt and implement effective legislative, executive, administrative, or other measures to promote: (f) public awareness of and access to information regarding the adverse health, economics, and environmental consequences of tobacco production and consumption.</p>	<ul style="list-style-type: none"> - During past year in school, students were taught about dangers of smoking. - During past year in school, students discussed reasons people their age smoke. - During past year in school, students were taught about the effects of smoking. 	<ul style="list-style-type: none"> - School has a policy specifically prohibiting tobacco use among students and/or teachers. - School has a policy declaring it "tobacco free." - School enforces its tobacco policy. - Received training. 	<ul style="list-style-type: none"> - Past year, were taught about the dangers of smoking. - Past year, discussed reasons people their age smoke. - Past year, were taught about the effects of smoking. - School has a policy specifically prohibiting tobacco use among students and/or teachers. - School has a policy declaring it "tobacco free." - School enforces its tobacco policy.

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Table 2 (continued from previous page)
**Global Youth Tobacco Survey (GYTS), Global School Personnel Survey (GSPS),
 and Global Health Professional Survey (GHPS) Measures
 That Can Be Used to Monitor the WHO Framework Convention on Tobacco Control (FCTC)**

WHO FCTC Article	GYTS Measures	GSPS Measures	GHPS Measures
<p>Media and Advertising Article 13: Tobacco advertising, promotion, and sponsorship. 1: Parties recognize that a comprehensive ban on advertising, promotion, and sponsorship would reduce the consumption of tobacco products.</p>	<ul style="list-style-type: none"> - During the past month, saw actors smoking on TV in videos, or in movies. - During the past month, saw ads for cigarettes on billboards. - During the past month, saw ads for cigarettes in newspapers or magazines. - During the past month, saw ads for cigarettes at sporting events, fairs, concerts, or community events. - Have an object with a cigarette brand logo on it. 		<ul style="list-style-type: none"> - During the past month, saw ads for cigarettes on billboards. - During the past month, saw ads for cigarettes in newspapers or magazines. - During the past month, saw ads for cigarettes at sporting events, fairs, concerts, or community events. - Saw cigarette brand names at sporting events or on TV. - Have an object with a cigarette brand logo on it.
<p>Cessation Article 14: Demand reduction measures concerning tobacco dependence and cessation. 1: Each Party shall develop and disseminate appropriate, comprehensive, and integrated guidelines based on scientific evidence and best practices, taking into account national circumstances and priorities, and shall take effective measures to promote cessation of tobacco use and adequate treatment for tobacco dependence.</p>	<ul style="list-style-type: none"> - Current smokers who desire to stop smoking. - Current smokers who tried to stop smoking during the past year. - Current smokers who ever received help of advice from a program or professional to help them stop smoking. - Current smokers who have or feel like having a cigarette first thing in the morning. 	<ul style="list-style-type: none"> - Current smokers who ever received help or advice from their school to stop using tobacco. 	<ul style="list-style-type: none"> - Current smokers who desire to stop smoking now. - Current smokers who tried to stop smoking during the past year. - Current smokers who ever received help or advice from a program or professional to help them stop smoking. - Current smokers who have or feel like having a cigarette first thing in the morning.
<p>Minor's Access and Availability Article 16: Sales to and by minors. 1. Each Party shall adopt and implement effective legislative, executive, administrative, or other measures at the appropriate level to prohibit the sale of tobacco products to persons under the age set by domestic law, national law, or 18. 2: Each Party shall prohibit or promote the prohibition of the distribution of free tobacco products to the public, especially minors.</p>	<ul style="list-style-type: none"> - Current smokers who usually get their cigarettes by buying them in a store, in a shop, or from a street vendor. - Current smokers who were not refused purchase of cigarettes because of their age. - Students who were offered "free" cigarettes by a cigarette company representative. 		<ul style="list-style-type: none"> - Has a (cigarette representative) ever offered you a free cigarette?

the past to stop smoking; more than eight in 10 in WPR and SEAR stated that they had. Among current smokers, 9.0% indicated a strong dependency on cigarettes (ie, they had or felt like having a cigarette first thing in the morning).

Access and Availability. Overall, four in 10 students who were current smokers could purchase cigarettes in stores (Table 1). The rate was highest in SEAR and EUR (61.6% and 55.1%, respectively) and lowest in AMR (22.3%). Almost seven in 10 students who bought cigarettes in a store were not asked to show proof of age; the rate was lowest in WPR (52.4%). One in 10 students had been offered free cigarettes; the rate was highest in EMR and AFR (13.4% and 12.8%, respectively) and lowest in WPR (7.4%).

FUTURE PROSPECTS FOR GTSS

The three surveys – the GYTS, GSPS, and GHPS – form the core of the GTSS developed to date by WHO, CDC, and CPHA. Countries have embraced the GTSS as providing data crucial for monitoring and evaluating tobacco control programs. Countries and research partners are conducting a variety of data dissemination efforts through publications, presentations, and an active GTSS web site hosted by CDC. For example, country GYTS data, reports, and country fact sheets are now available on the GTSS web site.¹⁰ More importantly, many countries have used GTSS data to inform politicians about the tobacco problem in their country, a result that has led to new policy decisions to prevent and control tobacco use.¹¹

Monitoring Country National Action Plans

Country National Action Plans are developed by governments to provide clear strategies for reducing and controlling tobacco use. A comprehensive tobacco control program generally includes public education campaigns to counteract tobacco advertising, community-based programs to reduce tobacco use, cessation-assistance programs, school-based programs, enforcement of existing tobacco restrictions, monitoring and evaluation of the control program, and related policy efforts to support the program, such as increased excise taxes, chronic disease programs targeting tobacco-related health problems, and environmental tobacco smoke restrictions. GTSS can provide countries with valuable feedback to evaluate and improve Country National Action Plans and to develop plans where none exist.

Monitoring the WHO Framework

The WHO Framework Convention on Tobacco Control (WHO FCTC), adopted by the 56th World Health Assembly in May 2003, is the world's first public health treaty on tobacco control. The WHO FCTC provides the driving force and blueprint for the global response to the pandemic of tobacco-induced death and disease. The convention embodies a coordinated, effective, and urgent action plan to curb tobacco consumption, laying out cost-effective tobacco control strategies on population-wide public policies, such as bans on direct and indirect tobacco advertising, tobacco taxes and price increases, smoke-free environments in all public places and workplaces, and large, clear, graphic health messages on tobacco packaging. In addition, the convention encourages countries to address

cross-border issues, such as illegal trade and duty-free sales.¹² One important feature of the WHO FCTC is the call for countries to establish programs for national, regional, and global surveillance.

*Research, surveillance and exchange of information – The parties shall establish, as appropriate, programmes for national, regional and global surveillance of the magnitude, patterns, determinants and consequences of tobacco consumption and exposure to tobacco smoke. Towards this end, the Parties should integrate tobacco surveillance programmes into national, regional and global health surveillance programmes so that data are comparable and can be analyzed at the regional and international levels, as appropriate.*¹²

The WHO FCTC and GTSS share the same goal: the development, implementation, and evaluation of effective tobacco control programs in all WHO Member States. What the WHO FCTC asks countries to monitor, the GYTS, GSPS, and GHPS can help to measure. As illustrated in Table 2, the three surveys are valuable instruments because they provide indicators for measuring achievement of seven WHO FCTC articles (surveillance and monitoring, prevalence, exposure to secondhand smoke, school-based tobacco control, cessation, media and advertising, and minor's access and availability). The WHO FCTC calls for countries to use consistent methods and procedures in their surveillance efforts. The three surveys were designed for exactly this purpose (ie, the sampling procedures, core questionnaire items, training in field procedures, and analysis of data are consistent across all survey sites).

The WHO FCTC also requires countries to be able to monitor the treaty's application. The GTSS helps each country establish applied research in public health and contributes to establishing continuous tobacco control surveillance and monitoring. The WHO FCTC also contributes to strengthening the leadership capacity of the Ministry of Health and other state health bodies responsible for tobacco control, not only in terms of public health advocacy, but also in negotiations with other sectors with respect to tobacco control. The GTSS also enhances the role of the nongovernmental sector by supporting civil society participation in surveillance, monitoring, and policy and program development.

CONCLUSION

Tobacco use represents the single greatest preventable cause of death worldwide. Every year, nearly 5 million persons die from tobacco-related illnesses, and this number is expected to more than double by 2030.¹³ The WHO FCTC is the first international treaty directed toward the control of tobacco use. The GTSS is the most comprehensive tobacco surveillance system ever developed and implemented. The synergy between the WHO FCTC and the GTSS offers countries a unique opportunity to develop, implement, and evaluate comprehensive tobacco control programs that both stand alone and stand up to global and regional comparisons. ■

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