Module 6: Surveillance and Evaluation

Monitoring Tobacco Use

Introduction

Dr. Kim Bao Giang, Vice Director of the Institute for Preventive Medicine and Public Health at Hanoi Medical University, introduces the Monitoring Tobacco Use Lecture.

Monitoring and surveillance are for the most part identical in that they involve routine systematic collection of information. The term surveillance takes its root from a French word meaning to “watch over”. In the context of public health, it involves closely monitoring certain health events in the population. However, surveillance goes further than monitoring—it also involves using the information gathered to plan public health interventions.

With monitoring and surveillance we are able to estimate the extent of a problem, determine the geographic distribution of illness and risk factors, generate an assumption, conduct research to check our hypothesis, deliver the results to those who need them, and use evidence gathered to facilitate planning and affect policy change.

Monitoring and surveillance are critical components of tobacco control programs because:

“What gets measured gets done.” – Margaret Chan, former WHO Director-General, November 2009, Geneva, Switzerland, launch of the report on Women and Health: Today’s Evidence Tomorrow’s Agenda

“If you can’t measure it, you can’t manage it and you can’t fix it.”

– Michael Bloomberg, January 2014, Twitter
Learning Objectives

- Define the terms surveillance and monitoring and describe their importance to tobacco control.
- Highlight the characteristics of a surveillance system and best practice guidelines for tobacco control surveillance.
- Enumerate the uses of tobacco control surveillance.

Characteristics of Surveillance Systems

Surveillance systems vary in many ways; they may vary according to geographic location, how often data are collected, or which group(s) data are collected from.

Learn more about characteristics of surveillance systems.

Events at the Local Level

Capture events at the local level: This could include city/county-level surveillance, state or provincial level surveillance (e.g., surveillance to determine use or patterns of use of tobacco in a smaller community).

Events at a Higher Level

Capture events at a higher level: This could include country/regional level surveillance (e.g., national tobacco surveys such as the Global Tobacco Surveillance System (GTSS), which we will discuss later, to capture prevalence and patterns of tobacco use and socio-behavioral factors associated with tobacco use).

Capture with Varying Frequency

Capture these events with varying frequency: This could include monthly, yearly, or at a particular time period—cross-sectional frequency. The decision on how frequently to collect surveillance data will depend on factors such as funds, scope of the surveillance, political will/leadership, etc.

A Specific Population
Hone in on a specific population: Populations could include youth aged 13–15 years (GYTS), people 15 and older (GATS), Lesbian Gay Bisexual Transgender (LGBT), rural population, women, health professionals (GHPSS), etc., depending on the needs or purpose of the surveillance.

**Surveillance: The Basics**

Surveillance is not a one-time event. Rather, surveillance involves continuous and periodic monitoring of health events in the population within a specified time period.

Learn about different aspects of surveillance.

**Continuous**

**Surveillance is continuous**: Surveillance involves continuous monitoring of health events (e.g., monitoring tobacco use monthly, yearly, biannually).

**Systematic and Predetermined**

**Systematic and predetermined**: Surveillance is done in a systematic manner according to a predetermined plan. Surveillance involves developing data monitoring systems that enable us to systematically gather information on specific health/disease events. Information is captured using methods that are rigorous and consistent with best practices. It is important to ensure that information is representative of the population from which it is collected and reproducible. Consistent methods of collecting data allow us to compare results between different time points and across geographies (or jurisdictions).

**Disseminating Results**

**Surveillance involves disseminating results**: Surveillance is beneficial when the outcomes are shared with stakeholders that can affect the necessary change with the information collected. Results of data gathered through surveillance can be relayed to key stakeholders and the public via multiple appropriate communication channels. Some examples include: press conferences and media coverage, reports and fact sheets, journal articles, and as part of health education campaigns.
Translating Findings to Action

**Surveillance involves translating findings into action:** Surveillance culminates in the development of an action plan from the evidence gathered during the monitoring/surveillance process. Possible actions range from disease control measures to policy and planning or resource allocation activities. Surveillance data may stimulate action beyond the health sector—tobacco surveillance data can influence issues such as environmental protection and human rights. Action is what distinguishes surveillance from the task of simply monitoring events.

Effective Surveillance Systems

Dr. Giang discusses effective surveillance systems.

Effective surveillance systems are simple, flexible, standardized, and collect quality information. Some surveillance efforts are essentially a census (i.e., they collect information on ALL cases of a health/disease event such as Ebola, cancer cases, etc.). As such, a number of the characteristics discussed above may not apply. Though the censuses are expensive, they provide systematic information about a population. Countries that utilize censuses to collect tobacco use data include: Austria, Brunei Darussalam, Germany, New Zealand, Niue, Tonga and Tuvalu.

Learn more about the details of effective surveillance systems.

- **Simple:** surveillance design is not overly complicated but addresses key questions.
- **Periodic:** done at regular intervals so as to monitor trends over time.
- **Flexible:** able to adapt to the setting, budget and other constraints without compromising the quality of the data.
- **Timely:** data turnaround time is quick enough to provide results that are still accurate at the time they are reported.
- **Standardized:** done in accordance with a pre-determined plan.
- **Quality:** surveillance methods must be thorough and reproducible within existing constraints.
• **Representative**: data should be applicable to the rest of the population.
• **Sustainable**: surveillance-monitoring should be built into tobacco control programs, with dedicated funding and human resources.

**Importance of Tobacco Control Surveillance**

Dr. Giang discusses the importance of tobacco control surveillance.

Surveillance is important to tobacco control efforts, because over time the data tell a story of what is going on at the population level. This story assists in identifying actions for the future.

In other words, surveillance data tell us where we have been, where we are going, and informs us on how we can get there.

Learn more about the importance of tobacco control surveillance.

• Provide information on the extent of the tobacco epidemic in a region, country or locality.
• Reveal subgroups in need of attention.
• Show changes in tobacco use following the implementation of tobacco control policies and programs.
• Identify new or emerging tobacco products.
• Shed light on tobacco industry practices that may increase demand for tobacco products and derail tobacco control efforts.
• Provide evidence to counter myths created by the tobacco industry.
• Track trends in the burden of tobacco use and tobacco-caused diseases, as well as monitor health impact of tobacco use.
• Guide the planning, implementation, and evaluation of programs to prevent and control disease.
• Evaluate MPOWER implementation.
• Prioritize the allocation of health resources.
• Guide immediate action.
The State of Tobacco Control Monitoring

Dr. Giang discusses the state of tobacco control monitoring.

Despite the importance of surveillance, the sixth WHO Report on the Global Tobacco Epidemic (2017), which focused specifically on tobacco control monitoring, remarks that “monitoring tobacco use and prevention policies is an area neither sufficiently prioritized nor adequately funded by countries.”

Quiz

Which statement about the details of effective surveillance systems is NOT correct?

- Surveillance design is not overly complicated.
- Surveillance methods must be unique and distinctive.
- Surveillance/monitoring should be built into tobacco control programs, with dedicated funding and human resources.
- Surveillance should be done at regular intervals so as to monitor trends over time.

Answer

Surveillance methods must be unique and distinctive: Surveillance design is not overly complicated but addresses key questions. Surveillance methods must be thorough and reproducible within existing constraints. Surveillance/monitoring should be built into tobacco control programs, with dedicated funding and human resources. Surveillance should be done at regular intervals so as to monitor trends over time.

Best Practice Guidelines in Tobacco Control Surveillance

Dr. Giang discusses best practice guidelines in tobacco control surveillance.

The WHO Global Tobacco Control Report presents clear guidelines on what is considered best practice for each MPOWER measure. Regarding monitoring tobacco use and prevention policies, WHO best practice guidelines require countries to do the following:
Conduct tobacco surveillance surveys for both adults and youth.

- Possess surveillance data that are recent (done within the last five years).
- Conduct surveillance that is representative of the country’s population.
- Conduct surveillance periodically (i.e., done at least every five years).

**Best Practice Guidelines in Tobacco Control Surveillance: WHO Report**

Every two years the WHO publishes a report that assess how countries are performing with respect to best practice guidelines.

Select the link to access the most recent WHO Report.

[WHO Report on Global Tobacco Epidemic 2017](#)

Select the link to access the most recent WHO Report, Executive Summary.

[WHO Report on Global Tobacco Epidemic 2017 – Executive Summary](#)

**Evaluation and Its Importance**

Dr. Giang discusses evaluation and its importance.

Evaluation seeks to uncover how and if a program is working as it was intended and if there are any unintended consequences. Evaluation is a systematic process that involves collecting and sifting through information, assessing the quality of the information, and using that information to make decisions. It is an ongoing cycle that includes program planning, implementation, and improvement.

**Evaluation: What to Ask?**

Dr. Giang discusses what to ask in evaluation efforts.

Evaluation helps us monitor our progress toward a specified goal; it also helps us assess the effectiveness of a program or activity and determine if program components are producing the desired results. Evaluation provides information to improve the intervention.

Learn which questions should be asked.

- Who needs the information; what information do they need?
• How much money, time, and effort can we put into this?
• What steps need to be taken to ensure that the evaluation complies with ethical and legal requirements, including consideration for the welfare of those that may be impacted by the process or results of the evaluation?
• What design will lead to accurate information?

**Case Study: The International Tobacco Control Policy Evaluation (ITC) Project: Sin Tax Reform Law**

**The situation**

The 2009 Philippines GATS survey revealed high rates of smoking among men (47.4%) and boys (12.9%).

**The response**

The results of this surveillance effort were instrumental in pushing for and developing a tax plan—the Sin Tax Reform Law—aimed at reducing demand for tobacco and generating funds to support tobacco control and health programs and infrastructure. The law simplified the tobacco excise tax structure and equalized excise tax rates across all price levels, leading to a considerable increase in tax and retail prices. Further, taxes were set to automatically increase by 4% annually from 2018.

**The result**

The 2015 GATS in the Philippines confirmed a decline in prevalence of tobacco use following the adoption of the tax law. Also, there was marked increase in revenue for healthcare.

**Summary**

Dr. Giang summarizes the Monitoring Tobacco Use Lecture.

We have discussed what surveillance is—an ongoing, systematic monitoring of health-related events; it also involves developing an action plan from the evidence gathered.
We also examined important attributes of effective surveillance systems—they are simple, flexible, standardized, timely, periodic, sustainable, and collect quality information that can be applied to the rest of the population—as well as best practice guidelines for tobacco control surveillance. In the next lecture, the Global Tobacco Surveillance System (GTSS) and its three main components will be covered in detail.

Further, we touched on the importance and application of tobacco control surveillance, and introduced the concept of evaluation within the context of tobacco control.

**Want to Learn More?**

From the CDC:
- [Introduction to Process Evaluation in Tobacco Use and Prevention and Control](#)
- [Key Outcome Indicators for Evaluating Comprehensive Tobacco Control Programs](#)

From the WHO:
- [WHO Publications on Surveillance](#)

**Tobacco Use Surveillance**

**Introduction**

Dr. Indu Ahluwalia, Chief of the Global Tobacco Control Branch of the US Centers for Disease Control and Prevention (CDC), introduces the Tobacco Use Surveillance Lecture.

The United States Centers for Disease Control and Prevention (CDC) defines public health surveillance as the ongoing, systematic collection, analysis, interpretation, and dissemination of data regarding a health-related event for use in public health action to reduce morbidity and mortality and to improve health.

Data are used to monitor health problems to support disease prevention and control. For example, identifying where or who is affected by a disease can be
helpful in planning programs, targeting interventions, and monitoring disease progression after implementing control efforts.

**Learning Objectives**

- Define key features of generating surveillance data.
- Describe the Global Tobacco Surveillance System and its three main components.
- Understand how tobacco surveillance data are used with some examples.

**Generating Surveillance Data for Tobacco Control and Prevention Purposes**

Dr. Ahluwalia discusses generating surveillance data.

You are already familiar with the World Health Organization’s Framework Convention on Tobacco Control (FCTC). The FCTC requires its Parties to “…regularly collect national data on the magnitude, patterns, determinants and consequences of tobacco use and exposure” (as defined in Article 20 of FCTC) and to “…have periodic reports of surveillance implementation” (as defined in Article 21 of FCTC).

As you already know, monitoring falls under the “M” of MPOWER.

![MPOWER](image)

**Purpose of Surveillance Data**

Dr. Ahluwalia discusses the purposes of surveillance.
Through surveillance of tobacco use behaviors, we have the ability to monitor the tobacco epidemic and evaluate the impact of tobacco control interventions and programs.

Learn about what surveillance data can accomplish.

- Understand tobacco use and its consequences over time.
- Identify emerging issues and research needs (e.g., use of new emerging tobacco products or tobacco alternatives, secondhand smoke exposure).
- Evaluate tobacco use prevention and control programs, policies, and legislation.

**Systematic Surveillance**

Dr. Ahluwalia discusses systematic surveillance.

Systematic surveillance provides standard indicators that allow us to compare data across countries and overtime.

**The Utility of Public Health Surveillance**

Dr. Ahluwalia discusses the utility of public health surveillance.

Now let’s look at several take-home messages about the utility of public health surveillance and the information it provides for critical decision-making.

Learn about the needs of public health surveillance and what it can do.

Public health surveillance can:

- Identify the magnitude of the public health problem.
- Detect a change in behaviors or disease patterns.
- Provide data for assessing impact, planning, and monitoring.
- Encourage research and develop hypotheses.

**Quiz**

Which action is **NOT** part of generating surveillance?
• Understand tobacco use and its consequences over time.
• Redirect funds from surveillance equipment purchases.
• Identify emerging issues and research needs.
• Evaluate tobacco use prevention and control programs, policies, and legislation.

**Answer**

Redirect fund from surveillance equipment purchases: Through surveillance of tobacco use behaviors, we have the ability to monitor the tobacco epidemic and evaluate the impact of tobacco control interventions and programs. Actions for this include: understand tobacco use and its consequences over time; identify emerging issues and research needs (e.g., use of new emerging tobacco products or tobacco alternatives, secondhand smoke exposure); and evaluate tobacco use prevention and control programs and policies.

**Global Tobacco Surveillance System**

Dr. Ahluwalia discusses the global tobacco surveillance system (GTSS).

The Global Tobacco Surveillance System, or GTSS, is a set of globally standardized surveys developed by CDC, WHO, and several other international partners for monitoring tobacco use and key tobacco control measures or indicators among youth and adult populations.

GTSS helps countries to monitor not only the problem of tobacco use behaviors and cognitions, but also the solutions. GTSS is linked with the WHO’s FCTC, and MPOWER demand reduction measures.

GTSS’s ability to monitor and track tobacco use and key tobacco control indicators enables countries to fulfill their obligation to FCTC.

**GTSS Framework**

GTSS follows a systematic framework.
A framework image is shown. There are six boxes—three at the top of the framework, one in the middle, and two boxes on the bottom.

The top-left box is titled Survey Implementation. It has three bulleted points:

- Questionnaire
- Sampling Procedures
- Survey Administration

An arrow points to the right of the Survey Implementation box. Text reads: Conduct Survey.

The top-middle box is titled Data Analysis. It has three bulleted points:

- Training
- Data Analysis
- Report Writing

An arrow points to the right of the Data Analysis box. Text reads: Reporting and Dissemination.

The top-right box is titled Program/Policy Development. It has five bulleted points:

- SHS (Secondhand Smoke)
- Media
• Cessation
• School/Community
• Access/Availability

An arrow points down and left from the Program/Policy Development box. It points to the bottom-right box titled Implement Programs/Policies.

Once programs are implemented the bottom two boxes and the middle box in the framework are meant to be repeated and modified in a cycle.

The bottom-left box is titled Repeat Survey Every 4-5 Years. An arrow points up and to the right to the middle box in the framework titled Track, Evaluate and Modify Programs. Text beneath this box reads: Comprehensive, National, Tobacco Control, Interventions, MPOWER. An arrow points down from the middle box Track, Evaluate, and Modify Programs to the bottom-right box Implement Programs/Policies.

The infographic’s source is the US Centers for Disease Control and Prevention.

Framework Focus

Dr. Ahluwalia discusses the framework focus.

Learn each step in the process.

The questionnaire

The questionnaire, sample, and survey administration are adapted to the country’s needs.

After the survey

After the survey is implemented, data are analyzed and compiled into reports, fact sheets, and additional dissemination tools. This helps develop new programs or policies, as well as track, evaluate, and modify programs based on the results.

Done periodically
If this is done periodically, it creates a cycle that helps to inform and evaluate impacts and gaps/disparities in programs and policies.

**Youth and Adult Surveys**

GTSS is comprised of both youth and adult surveys to monitor tobacco use, susceptibility, and track key tobacco control measures.

Select each link to learn about each survey.
- Global Youth Tobacco Survey (GYTS)
- Global Adult Tobacco Survey (GATS)
- Tobacco Questions for Surveys (TQS)

**Global Youth Tobacco Survey – GYTS**

Dr. Ahluwalia discusses the global youth tobacco survey (GYTS).

The global youth tobacco survey (GYTS) is a global standard for monitoring youth tobacco use and is the largest public health surveillance system in the world. It is active in over 180 countries. GYTS is valuable because it allows countries to measure progress in reducing tobacco use among youth.

**GYTS Data**

Dr. Ahluwalia discusses GYTS data.

GYTS is a self-administered paper-based survey that collects data from youth—ages 13 to 15—who attend school. Data can be compared across countries and compared over time to measure how tobacco use changes.

GYTS’s protocol guides each country to follow a standard, systematic, consistent process for data collection. The process is rigorous and maintains a high standard from beginning to end to build credible scientific evidence for each country.
A process image is shown. There are seven boxes. The first box is titled Country Engagement Process. It has four bulleted points:
• Country commitment
• Implementing Agency selection
• Research Coordinator nomination
• Obtaining school enrollment list

An arrow points to the box below it. The second box is titled Training Workshop. It has four bulleted points:

• Questionnaire adaptation
• Sample design development
• Proposal development
• Survey implementation instructions

An arrow points to the box below it. The third box is titled GYTS Implementing Agency [Research Coordinator] READY. It has three bulleted points:

• Questionnaire adapted and finalized
• Sample selection completed and documentation received
• Survey materials received

An arrow points to the box below it. The fourth box is titled Fieldwork and Data Management. It has two subcategories, each with three bulleted points:

Fieldwork

• Obtaining school participation
• Data collection
• Mailing completed survey materials

A right arrow points to the Data Management box. It is to the right of the Fieldwork box.

Data Management

• Data processing
• Quality assurance
• Sample weighting
An arrow points to the box below it. The fifth box is titled Analysis Workshop. It has three bulleted points:

- Data analysis and tabulation
- Fact Sheet finalization
- Country Report writing

An arrow points to the box below it. The sixth box is titled Release. It has two bulleted points:

- Fact Sheet
- Country Region

An arrow points to the box below it. The seventh box is titled Policy and Program Workshop.

The GYTS process source is the US Centers for Disease Control and Prevention.

**GYTS Topics**

GYTS gathers data that cover seven topic areas such as the role of the media and advertising in students’ use of cigarettes. The data from GYTS can be used to monitor progress in implementing the FCTC.

GYTS includes the following topics:

- Knowledge and attitudes of students on cigarette smoking
- Prevalence of cigarette smoking and other tobacco use among students
- Role of the media and advertising in student’s use of cigarettes
- Access to cigarettes
- Tobacco-related school curriculum
- Secondhand tobacco smoke exposure
- Cessation of cigarette smoking

**GYTS Map**

Dr. Ahluwalia discusses the GYTS map.
GYTS started in 1999, and is now active in over 185 countries. The survey has been repeated in multiple rounds in several countries generating trend data and providing systematic and consistent comparisons across and within countries over time.

One hundred and forty-four countries have repeated a second round, 108 countries have done three rounds, 25 countries have done four rounds, and 4 countries have done five rounds.

A global map is shown. The title reads: GYTS 1999-2018: Active in 188 countries. Different countries are shaded different colors depending upon which round(s) of the GYTS they participated in.

Round 1 countries include:

- Angola
- Azerbaijan
- Benin
- Brunei
- Burundi
- Cape Verde
- Central African Republic
• Chad
• Congo Democratic Republic
• Equatorial Guinea
• Eritrea
• Ethiopia
• Finland
• Gabon
• Gambia The
• Guinea
• Guniea-Bissau
• Honduras
• Kiribati
• Liberia
• Madagascar
• Marshall Islands
• Niue
• Papua New Guinea
• Portugal
• Puerto Rico
• Rwanda
• Samoa
• Sao Tome and Principe
• Sierra Leone
• Singapore
• Solomon Islands
• Tokelau
• Tonga
• Turkmenistan
• Tuvalu
• United Kingdom
Vanuatu

Round 2 countries include:

- Afghanistan
- Algeria
- Armenia
- Bahrain
- Belarus
- Botswana
- Cambodia
- Cameroon
- Colombia
- Comoros
- Congo
- Cook Islands
- Côte d'Ivoire
- Cyprus
- Dominican Republic
- Ecuador
- Estonia
- Greece
- Hungary
- Iran
- Italy
- Lesotho
- Macedonia
- Malaysia
- Mali
- Mauritius
- Namibia
• Nicaragua
• Nigeria
• Saint Kitts and Nevis
• San Marino
• Somalia
• Tajikistan
• Tanzania
• Uzbekistan

Round 3 countries include:

• Albania
• Antigua and Barbuda
• Bangladesh
• Belize
• Bolivia
• Bosnia and Herzegovina
• Bulgaria
• Burkina Faso
• Chile
• China
• Croatia
• Cuba
• Czech Republic
• Djibouti
• Dominica
• El Salvador
• Fiji
• Georgia
• Ghana
• Grenada
- Guatemala
- Haiti
- India
- Iraq
- Jamaica
- Kazakhstan
- Kenya
- Korea Republic
- Kuwait
- Kyrgyzstan
- Lao PDR
- Lebanon
- Libya
- Malawi
- Maldives
- Mauritania
- Mexico
- Micronesia
- Mongolia
- Montenegro
- Morocco
- Mozambique
- Myanmar
- New Zealand
- Niger
- Oman
- Pakistan
- Panama
- Paraguay
- Poland
- Qatar
- Republic of Moldova
- Romania
- Saint Lucia
- Saudi Arabia
- Senegal
- Serbia
- Seychelles
- Slovakia
- Slovenia
- St Vincent and the Grenadines
- Suriname
- Swaziland
- Syria
- Thailand
- Timor Leste
- Togo
- Trinidad and Tobago
- Tunisia
- Turkey
- Uganda
- Ukraine
- United Arab Emirates
- Uruguay
- Vietnam
- Yemen
- Zambia

Round 4 countries include:

- Argentina
• Bahamas
• Barbados
• Bhutan
• Brazil
• Costa Rica
• Egypt
• Guyana
• Indonesia
• Latvia
• Lithuania
• Nepal
• Palau
• Peru
• Russian Federation
• South Africa
• Sudan
• Venezuela
• Zimbabwe

Round 5 countries include:

• Jordan
• Philippines
• Sri Lanka

The GYTS map source is the US Centers for Disease Control and Prevention.

**Global Adult Tobacco Survey – GATS**

Dr. Ahluwalia discusses the global adult tobacco survey (GATS).

The global adult tobacco survey (GATS) is a global standard for monitoring adult tobacco use. The data are collected from people 15 and older in their homes. As with
the GYTS, the results from GATS are comparable within and across countries and allows countries to compare data over time.

GATS follows a comprehensive standard protocol for all aspects of implementation, which guides each country to follow a standard, systematic, consistent process for data collection. The process is quite rigorous and high standards are maintained.
A process image is shown. There are ten boxes beneath a header titled: Process. There are five colored boxes that indicate a technical workshop series. There are nine headers with lists that correspond to the first nine process boxes. These
headers with lists are beneath a title: Guidelines and Protocol. The colored boxes that indicate a technical workshop series are placed next to the headers in the Guidelines and Protocol column indicating different workshops.

The first box has two headers: Introductory Country Engagement, which has one bullet point: Country commitment. The second header reads GATS Implementing Agency Selections, which has one bullet point: National statistics office/census agency. Implementation Guidelines are beside this first box. Two colored boxes appear beside this header. The guidelines have four subtopics:

- Country Engagement Process
- Implementing Agency Selection Guidelines
- Proposal Development Guidelines
- Implementation Instructions

An arrow points from the first box to the box below it. The second box is titled GATS Orientation, which has four bullet points: Technical, Process, Proposal. A list titled Comprehensive Standard Protocol is beside this second box. A sub-header reads: GATS Questionnaire. Five colored boxes appear beside this sub-header. There are two topics beneath this sub-header:

a. Core Questionnaire with Optional Questions
b. Question by Question Specifications

An arrow points from the second box to the box below it. The third box is titled Proposal Submission, Review and Funding, which has one bullet point: Technical and budget reviews. A list titled GATS Sample Design is beside this third box. Three colored boxes appear beside this header. There are two topics:

a. Sample Design Manual
b. Sample Weights Manual

An arrow points from the third box to the box below it. The fourth box is titled Pretest Training and Implementation.
An arrow points from the fourth box to the box below it. The fifth box is titled GATS Implementing Agency READY, which has four bullet points:

- Questionnaire adapted and finalized
- Sample design approved
- Mapping and listing completed
- Handhelds received and programmed

A list titled GATS Fieldwork Implementation is beside this fifth box. Three colored boxes appear beside this header. There are three topics:

a. Field Interviewer Manual
b. Field Supervisor Manual
c. Mapping and Listing Manual

An arrow points from the fifth box to the box below it. The sixth box is titled Field Survey Training, which has two bullet points:

- Fieldwork
- Data Management

A list titled GATS Data Management is beside this sixth box. Three colored boxes appear beside this header. There are four topics:

- Programmer’s Guide to General Survey System
- Core Questionnaire Programming Specifications
- Data Management Implementation Plan
- Data Management Training Guide

An arrow points from the sixth box to the box below it. The seventh box is titled Fieldwork and Data Management; it has two sub-headers: Fieldwork (6 to 13 weeks) and Data management, which has two bullet points:

- Quality assurance
- National data aggregation
An item titled GATS Quality Assurance: Guidelines and Documentation is beside the seventh box. Four colored boxes appear beside this header. A list titled GATS Analysis and Reporting Package is beneath this item. One colored box appears beside this header. There are three topics:

a. Fact Sheet Template  
c. Indicator Definitions

An arrow points from the seventh box to the box below it. The eighth box is titled Sample Weighting, Quality Assurance, Analysis and Reporting, which has four bullet points:

• Sample weighting approval  
• Fact Sheet and Country Report adaptation  
• Data analysis and tabulation  
• Country Report writing

A list titled GATS Data Release and Dissemination is beside the eighth box. One colored box appears beside this header. There are two topics:

a. Data Release Policy  
b. Data Dissemination: Guidance for the Initial Release of the Data

An arrow points from the eighth box to the box below it. The ninth box is titled Release and Dissemination, which has two bullet points:

• Fact Sheet  
• Country Report

A list titled GATS Partner Organizations is beside the ninth box. There are five partners listed:

• US Centers for Disease Control and Prevention  
• CDC Foundation  
• Johns Hopkins Bloomberg School of Public Health  
• RTI International
- World Health Organization

An arrow points from the ninth box to the box below it. The tenth box is titled Data to Program and Policy Interventions.

The GATS process source is the US Centers for Disease Control and Prevention.

**GATS Topics**

GATS gathers data that cover six topic areas such as tobacco use prevalence. The data from GATS and GYTS can be used to monitor progress with implementation of the FCTC.

GATS includes the following topics:

- Tobacco use prevalence (smoking and smokeless tobacco products)
- Secondhand tobacco smoke exposure and policies
- Cessation
- Knowledge, attitudes, and perceptions
- Exposure to pro and tobacco control media
- Economics
A global map is shown. The title reads: GATS 2008-2018: Active in 34 Countries. Different countries are shaded different colors depending upon which round(s) of the GATS they participated in.

Round 1 countries and years include:

- Argentina (2012)
- Botswana (2017)
- Brazil (2008)
- Cameroon (2013)
- Costa Rica (2015)
- Egypt (2009)
- Ethiopia (2016)
- Greece (2013)
- Indonesia (2011)
- Kazakhstan (2014)
- Kenya (2013)
- Malaysia (2011)
- Morocco (2010)
- Nigeria (2012)
- Pakistan (2014)
- Panama (2015)
- Poland (2009)
- Qatar (2013)
- Saudi Arabia (2017)
- Senegal (2015)
- Sri Lanka (2018)
- Tanzania (2017)
- Uganda (2013)
• Nigeria (2012)
• Pakistan (2014)
• Panama (2013)
• Poland (2009)
• Qatar (2013)
• Saudi Arabia (2017)
• Senegal (2015)
• Sri Lanka (2018)
• Tanzania (2017)
• Uganda (2013)

Round 2 countries and years include:
• Bangladesh (2009/2017)
• China (2010/2017)
• India (2009/2017)
• Mexico (2009/2015)
• Philippines (2009/2015)
• Romania (2011)
• Russian Federation (2009/2016)
• Thailand (2009/2011)
• Ukraine (2010/2016)
• Uruguay (2009/2016)
• Viet Nam (2010/2015)

Round 3 countries and years include:
• Turkey (2008/2012/2016)

The GATS map source is the US Centers for Disease Control and Prevention.

**Tobacco Questions for Surveys (TQS)**

Dr. Ahluwalia discusses the tobacco questions for surveys (TQS).
GTSS partners developed “Tobacco Questions for Surveys: A Subset of Key Questions from Global Adult Tobacco Survey”—TQS for short. TQS questions can be included in any health, social, or other survey to obtain a comprehensive picture of tobacco use and control in any population of interest. Countries can select indicators and corresponding survey questions based on their needs and tobacco control situations.

Learn about the TQS.

- The TQS is comprised of three questions on smoking prevalence and 19 questions covering key MPOWER topics.
- The TQS booklet is available in Arabic, Chinese, English, French, Portuguese, Russian, and Spanish.

Survey Platform for TQS Integration

Dr. Ahluwalia discusses survey platforms for TQS integration.

TQS can be integrated into many national or international surveys. For more information about TQS, please email gtssINFO@cdc.gov.

TQS Map

During 2009—2018, over 79 countries integrated TQS.

![TQS Map 2009-2018: Active in 79 countries](image_url)
A global map is shown. The title reads: TQS Implementation 2009-2018: Active in 79 countries. Different countries are shaded different colors depending upon if the country has completed TQS integration rounds.

Round 1 countries include:

- Argentina
- Azerbaijan
- Bangladesh
- Benin
- Bermuda
- Bhutan
- Botswana
- Brazil
- Brunei
- Burkina Faso
- Cameroon
- Cayman Islands
- Cook Islands
- Côte d’Ivoire
- Croatia
- El Salvador
- Ethiopia
- Gambia The
- Ghana
- Greece
- Guatemala
- Hungary
- India
- Indonesia
- Iraq
- Kazakhstan
- Kenya
- Kuwait
- Kyrgyzstan
- Lesotho
- Malaysia
- Maldives
- Mali
- Mauritania
- Mexico
- Micronesia
- Mongolia
- Nepal
- Niger
- Qatar
- Republic of Moldova
- Romania
- Russian Federation
- Rwanda
- Samoa
- Saudi Arabia
- Sierra Leone
- Slovakia
- Slovenia
- South Africa
- Sri Lanka
- St Vincent and the Grenadines
- Swaziland
- Tajikistan
- Thailand
• Timor Leste
• Togo
• Tonga
• Turkmenistan
• Uzbekistan

Round 2 countries include:
• Armenia
• Czech Republic
• Egypt
• Georgia
• Lao PDR
• Myanmar
• Pakistan
• Senegal
• Uganda

Round 3 countries include:
• Cambodia

Round 4 countries include:
• China

Round 5 countries include:
• Turkey

The TQS map source is the US Centers for Disease Control and Prevention.

Continuous Evaluation of Public Health Surveillance Systems

Dr. Ahluwalia discusses the continuous evaluation of public health surveillance systems.
The purpose of evaluating public health surveillance systems is to ensure that public health problems are being monitored efficiently and effectively. For example, two components of the GTSS were retired, as they were no longer priorities for GTSS partners. These components were the Global School Personnel Survey (GSPS) and the Global Health Professions Student Survey (GHPSS).

**GYTS Data and Examples**

GYTS data indicate that in 61 countries the median smoking prevalence was 10.7% among youth who attend school. The prevalence of tobacco smoking among students aged 13–15 in 61 countries ranged from 1.7% (in Sri Lanka) to 35.0% (in Timor-Leste).

**GYTS: Monitoring Current Cigarette Smoking**

Dr. Ahluwalia discusses monitoring current cigarette smoking and GYTS.

Let’s look at two examples of GYTS data. The data can be used to compare two countries—for example, Jordan and Iraq in 2014. Additionally, it can track change over time within a country as illustrated in the trend analysis for current cigarette smoking among youth in the Philippines from 2000–2015.
A bar graph and a line graph are shown side by side.


The x-axis is labeled with two countries: Jordan and Iraq. The y-axis is labeled with percent and begins at zero and goes to 30 in increments of 5. Jordan’s bar is 11.4 percent. Iraq’s bar is 5.7 percent.

Three notes appear beneath both graphs. The first two notes apply to the bar graph:

- Current cigarette smoking is defined as smoking cigarettes on at least 1 day during the last 30 days
- Significant difference between Jordan and Iraq, p-value<0.05


The x-axis is labeled with years and begins with year 1999 and goes to 2016 in increments of one year. The y-axis is labeled with percent and begins at zero and goes to 30 in increments of 5.

There are five points on the graph:

- 2000, 18.2
- 2004, 11.5
- 2007, 17.5
- 2011, 8.9
- 2015, 12.0

Line segments are drawn connecting the points. A dotted line is drawn from the upper left to the lower right; it slants down slightly.

Three notes appear beneath both graphs. The first and third notes apply to the line graph:

- Current cigarette smoking is defined as smoking cigarettes on at least 1 day during the last 30 days
- Linear trend is significant, p-value<0.05

The GYTS Monitoring Current Cigarette Smoking graphs source is the US Centers for Disease Control and Prevention.

**GATS: Monitoring Exposure to Secondhand Smoke**

Dr. Ahluwalia discusses monitoring exposure to secondhand smoke and GATS.

Similar to GYTS data, GATS data can and has been used by countries to track key tobacco control indicators outlined by the FCTC. The measures that GATS tracks allows countries to fulfill their FCTC obligations to help combat the global tobacco epidemic. For example, secondhand smoke in the workplace can be compared across two countries, as illustrated here with Thailand and Indonesia in 2011. It can also track change over time within a country as illustrated in the dark blue bars for Viet Nam between 2010 and 2015.

Two bar graphs are shown side by side.

The bar graph on the left is titled: Overall Exposure to Secondhand Smoke in the Work Place, Thailand and Indonesia 2011.
The x-axis is labeled with two countries: Thailand and Indonesia. The y-axis is labeled with percent and begins at zero and goes to 70 in increments of 10. Thailand’s bar is 30.5 percent. Indonesia’s bar is 51.3 percent.

The second bar graph is titled: Overall Exposure to Secondhand Smoke in the Work Place, Viet Nam 2010 - 2015.

The x-axis is labeled with two years, 2010 and 2015. The y-axis is labeled with percent and begins at zero and goes to 70 in increments of 10. Viet Nam’s 2010 bar is 55.9 percent. Viet Nam’s 2015 bar is 42.6 percent.

Two notes appear beneath both graphs and apply to both graphs:

- Exposure to secondhand smoke in the work place is defined as being exposed to smoke in indoor areas at work during the past 30 days
- Significant difference, p-value<0.05

The GATS Monitoring Exposure to Secondhand Smoke graphs source is the US Centers for Disease Control and Prevention.

**GATS: Tobacco Smoking at Baseline and Follow-up in Seven Countries**

Dr. Ahluwalia discusses tobacco smoking at baseline and follow-up in seven countries and GATS.

Here is another example of GATS comparison of tobacco use across time and across countries. This example shows that while each country is unique—with its own context—these data provide evidence for local action such as tracking progress. They also show how each country stands among other countries.
One bar graph is shown. The graph’s subtitle is: Tobacco Smoking at Baseline and Follow-up in Eight Countries, GATS.

The x-axis is labeled with eight countries: Mexico, Philippines, Russian Federation, Thailand, Turkey, Ukraine, Viet Nam, and India. The y-axis is labeled with percent and begins at zero and goes to 50 in increments of 5. There are two bars for each country, Round 1 and Round 2:

- Mexico: Round 1: 15.9, Round 2: 16.4
- Philippines: Round 1: 28.2, Round 2: 22.7 (significant difference, p-value<0.05)
- Russian Federation: Round 1: 39.1, Round 2: 30.3 (significant difference, p-value<0.05)
- Thailand: Round 1: 23.7, Round 2: 24.0
- Turkey: Round 1: 31.2, Round 2: 27.1 (significant difference, p-value<0.05)
- Ukraine: Round 1: 28.3, Round 2: 22.8 (significant difference, p-value<0.05)
- Viet Nam: Round 1: 23.8, Round 2: 22.5
- India: Round 1: 14.0, Round 2: 10.7 (significant difference, p-value<0.05)

The following note appears beneath the graph:
• Tobacco smoking is defined as currently smoking tobacco on a daily basis or less than daily basis

The GATS Monitoring Tobacco Smoking Across Time and Countries graph source is the US Centers for Disease Control and Prevention.

**TQS: Achieving Surveillance Sustainability in Turkey**

Turkey is a great example of monitoring over time as the country has implemented GATS in 2008, Health Interview Survey (HIS) in 2010 (with TQS integration), and GATS in 2012. This graph compares the three of them.

One bar graph is shown titled: Monitoring Tobacco Use Over Time Using TQS: Turkey.

The x-axis is labeled with Total, Male, Female for Current smokers, and Total, Male, Female for Current daily smokers. The y-axis is labeled with percent and begins at zero and goes to 60 in increments of 10. There are three bars for each category, Current smokers and Current daily smokers. The three bars correspond to three surveys: GATS 2008, HIS 2010, and GATS 2012.

The approximate percentages for Current smokers include:
• Total: 31% GATS 2008, 29% HIS 2008, 27% GATS 2012
• Male: 48% GATS 2008, 43% HIS 2008, 41% GATS 2012
• Female: 15% GATS 2008, 16% HIS 2008, 13% GATS 2012

The approximate percentages for Current daily smokers include:

• Total: 28% GATS 2008, 25% HIS 2008, 24% GATS 2012
• Male: 43% GATS 2008, 39% HIS 2008, 38% GATS 2012
• Female: 11% GATS 2008, 12% HIS 2008, 10.5% GATS 2012

The following note appears beneath the graph:

• This indicator shows that we can provide the sustainability and consistency in measuring some indicators on tobacco by means of HIS conducted every two years

Source: TurkStat presentation at the 2014 OIC-SESRIC StatCom meeting

**Subnational Monitoring Using TQS: China City Adult Tobacco Survey**

Dr. Ahluwalia discusses subnational monitoring using TQS in a China city adult tobacco survey.

An example of subnational implementation of TQS in 14 cities in China provides data for comparison. The Subnational China TQS showed variation in tobacco use prevalence and awareness about e-cigarettes and use in China’s 14 major cities.

Access the China’s Adult Tobacco Survey from the CDC website.

*City Adult Tobacco Survey in 14 Cities*

**Summary**

Dr. Ahluwalia summarizes the Tobacco Use Surveillance Lecture.

We have just defined the Global Tobacco Surveillance System (GTSS) and its three main components: GYTS, GATS, and TQS and the importance tobacco surveillance has on helping to curb the epidemic worldwide. So if we can measure it, we can do something about it.
Want to Learn More?

If you are interested in learning more about how to access GTSS data and the dissemination of CDC information, visit the CDC website:

CDC

Monitoring Tobacco Control Policies and Interventions

Introduction

Dr. Soewarta Kosen, former Policy Researcher at the National Institute of Health Research and Development, Ministry of Indonesia, introduces the Monitoring Tobacco Control Policies and Interventions Lecture.

Tobacco control policies have the potential to reduce tobacco consumption at the population level, but only if they are appropriately and widely implemented. Thus, tobacco control surveillance needs to track the enactment, compliance, and impacts of these policies.

In this section, you will learn about some of the principles of monitoring, assessing compliance, and evaluating tobacco control policies.

Learning Objectives

- Describe approaches to monitoring the establishment, compliance, and impacts of tobacco control policies.
- Identify existing examples of surveillance mechanisms for tobacco policy monitoring and evaluation.

Overview of Tobacco Control Policy Monitoring

Dr. Kosen provides an overview of tobacco control policy monitoring.

The WHO FCTC’s potential to significantly reduce tobacco consumption rests upon the political commitment of countries to (1) enact and (2) fully implement the
evidence-based interventions contained in the Treaty to achieve the desired (3) impacts on population tobacco use.

See the three components a tobacco control policy monitoring system should track.

- **The enactment** of tobacco control policies and legislation, and their alignment with best practice standards—this establishes what policies exist and the quality of these policies.
- **Compliance** with existing policies—this determines the degree of implementation of existing policies, recognizing that legislation on the books is only as effective as how well it is implemented on the ground.
- **The impacts** of implemented policies on population tobacco use—this evaluates the effectiveness of policy interventions to reduce tobacco consumption and its consequences.

**Policy Monitoring System: Key Elements**

The key elements of a policy monitoring system are similar to those that monitor tobacco use.

- Monitoring is an ongoing process, with periodic and regular data collection over time, to track change.
- Monitoring is done systematically—Monitoring tobacco use behavior requires the use of rigorous epidemiologic approaches. Monitoring tobacco control policies involves additional data gathering techniques; nonetheless, scientific rigor remains necessary to ensure the accuracy and validity of data collected.
- Results should be disseminated appropriately and in a timely manner to relevant stakeholders.
- The information should guide action to further enhance the reduction of tobacco use.

**How Monitoring Tobacco Control Policies Helps**

Learn what monitoring tobacco control policies helps to do.
Establish

Establish the presence (or absence) of various tobacco control policy interventions.

Characterize

Characterize existing policies in relation to a recognized best practice (e.g., WHO FCTC articles and their implementing guidelines provide a floor for best practice standards).

Create

Create a checklist describing the necessary components of a policy intervention, and determine if the existing policy conforms with these essential components. Preferably, the presence of these components should be assessed with a categorical “Yes/No” question that leaves little room for subjective interpretation and conforms to the best practice standards.

For example, a policy promoting a 100% smoke-free ban in public places requires an assessment of (1) the specific types of public places included in the ban; (2) “No Smoking” signage requirements, including their size, content, and placement; and (3) whether exemptions exist (presence of designated smoking area) in the current version of the policy. These all could be delineated in a detailed checklist.

Sources of Data

There are two primary sources of data that can be used to establish the scope of enacted tobacco policies.

- Legislative databases: Most countries maintain national legislative databases. Within a country, some local governments likewise maintain their own subnational legislative databases.

- Reports from national focal persons or other relevant key informants: this is essential when assessing the presence of subnational and/or institutional policies, which may not be included in national or subnational legislative databases.
Challenges in Characterizing Policy Interventions

Dr. Kosen discusses challenges in characterizing policy interventions. In many countries, tobacco control policies are not clearly defined and straightforward. Often, the data collector is forced to make a judgment regarding how closely a given policy matches the best practice standard within the jargon of the law specific to a country. Characterizing policy interventions becomes even more complicated when implementing rules and regulations that have not yet been established or are not clearly delineated.

Learn about the challenges in characterizing policy interventions.

- In some countries, regulations are general, allowing administrative actions to determine how regulations are to be implemented. When the regulations that are supposed to operationalize legislation are open to interpretation by the implementing agencies, the quality of the policy will be largely determined by capacity and political will.
- Some regulations have loopholes allowing the tobacco industry to evade the regulations and legislation.
- In a number of countries, different government authorities may issue contradictory regulations at the same time period; often it is not clear which decree has precedence.
- In other countries, one must consider court orders suspending or modifying regulations.
- While judgment calls by the data collector may not be entirely unavoidable, the agency responsible for policy monitoring would need to clearly specify, define, and interpret what attributes of the policy need to be assessed to ensure data quality.

Case Study: Reporting Instrument of the COP to the WHO FCTC and the Global Tobacco Control Report

The situation
The tobacco epidemic requires constant surveillance. When the WHO FCTC was ratified, it also stipulated a mandatory reporting mechanism for all the ratifying Parties to monitor progress in the implementation of its various Articles.

**The response**

WHO, working with its member states, developed two complementary reporting systems for global tobacco control. The biennial *Global Progress Report on the Implementation of the WHO FCTC* is produced by the WHO FCTC Convention Secretariat, using member states’ self-reported data to monitor their implementation of the treaty and its specific provisions. The WHO Tobacco Free Initiative (TFI) creates the *WHO Report on the Global Tobacco Epidemic* on the years alternating with the *Global Progress Report*. The *WHO Report* tracks tobacco use prevalence, monitors the status of MPOWER measures over time, and assesses achievement levels across each of the measures using a set of pre-determined benchmarks. The WHO collects data on national-level legislation from member states, using the information to create a comparable assessment matrix that allows for a fair comparison of progress across the various MPOWER policy areas.

**The result**

These two complementary systems provide a comprehensive monitoring of tobacco control progress globally. The FCTC Secretariat and WHO TFI collaborate when creating these reports to ensure clarity, accuracy, and consistency across the various data indicators.

**Case Study: E-cigarette Policy Scan**

**The situation**

The rapid increase in the use of electronic cigarettes and related products is far outpacing monitoring data. With scant information to create a reliable evidence base, policy responses to the consumption of these products remain fragmented across countries.

**The response**
The Institute of Global Tobacco Control used Tobacco Watcher, a real-time surveillance system that monitors tobacco-focused media stories across the globe, and other sources, to identify which countries have established or revised existing policies to regulate electronic cigarette products. Researchers at the Institute sift through the media stories using a systematic protocol to identify e-cigarette policies. The information on e-cigarette policies extracted from media sources is relayed to Ministry of Health or other government agency representatives and/or in-country experts for confirmation. A website keeps track of verified current e-cigarette policies.

Country Laws Regulating E-cigarettes

The E-cigarette policy scan, maintained online by IGTC, exemplifies the key elements of a sound policy monitoring system:

1. It provides ongoing monitoring, and can track changes in e-cigarette policies over time. Specifically, it can identify the adoption of new policies and the revision and/or repeal of previous policies.

2. It uses a systematic approach to collect and analyze the data, and to validate the accuracy of the data through a network of in-country experts and regulatory bodies.

3. It provides an online platform to quickly disseminate policy data to stakeholders through the website.

4. The information on policies can be utilized by national and subnational tobacco control advocates to guide future action in regulating e-cigarettes.

The result

At present there are data from 98 countries that have policies described on the E-cigarette Policy Scan site. The policies are categorized according to the following domains: policies related to the sale (including minimum age), advertisement, promotion, sponsorship, packaging (child safety packaging, health warning labeling and trademark), product regulation (nicotine volume/concentration,
safety/hygiene, ingredients/flavors), reporting/notification, taxation, use (vape-free), and classification of e-cigarettes. While still too early to evaluate the impact of this type of data clearinghouse on national policy responses to e-cigarette use, practitioners are tapping into the policy database. It is anticipated that this monitoring resource may provide guidance as countries grapple with how best to address the use of these products.

**Assessing Compliance with Tobacco Control Policies**

Dr. Kosen discusses assessing compliance with tobacco control policies.

Policies are only as effective as their implementation. Policy monitoring systems assess not just what policies are enacted, but also how well existing policies are implemented.

See how policy implementation involves enforcement and compliance.

- **Enforcement** refers to the actions and infrastructure to induce, encourage, or compel compliance with legislative or regulatory requirements. Enforcement is a mechanism to ensure compliance.

- **Compliance** refers to the state of conformity with legislative or regulatory requirements. Compliance is the goal of enforcement. Thus, from a practical standpoint, it is more important to assess compliance with tobacco policies.

**Assessing Compliance with Population Surveys**

Dr. Kosen discusses indicators and types of data to assess compliance.

Compliance assessments can involve surveying people using a set of policy implementation indicators and/or other means of gathering data to verify that policies are being put into effect.

The WHO Global Tobacco Control Report of 2017 identified a set of indicators to monitor the MPOWER interventions that could be included in population surveys to gauge the level of implementation of these policy interventions using quantifiable population measures.
These indicators gauge the level of compliance from the general public’s perspective, and when conducted using a nationally representative sample and sound methodology, provide a good assessment of policy implementation. However, population surveys are costly and usually conducted infrequently, sometimes with as many as five or more years intervening between data collection periods.

**MPOWER Indicators**
<table>
<thead>
<tr>
<th>Category</th>
<th>Indicator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MONITOR</td>
<td>Current tobacco users</td>
<td>Percentage of respondents who currently use any tobacco products (smoked and smokeless)</td>
</tr>
<tr>
<td></td>
<td>Current tobacco smokers</td>
<td>Percentage of respondents who currently smoke any tobacco products</td>
</tr>
<tr>
<td></td>
<td>Daily tobacco smokers</td>
<td>Percentage of respondents who currently smoke tobacco products daily</td>
</tr>
<tr>
<td></td>
<td>Current smokeless tobacco users</td>
<td>Percentage of respondents who currently use smokeless tobacco</td>
</tr>
<tr>
<td></td>
<td>Daily smokeless tobacco users</td>
<td>Percentage of respondents who currently use smokeless tobacco daily</td>
</tr>
<tr>
<td>PROTECT</td>
<td>Exposure to second-hand smoke at home</td>
<td>Percentage of respondents who report that smoking occurs inside their home</td>
</tr>
<tr>
<td></td>
<td>Exposure to second-hand smoke at work</td>
<td>Percentage of indoor workers who were exposed to tobacco smoke at work in the past 30 days</td>
</tr>
<tr>
<td>OFFER</td>
<td>Tobacco use quit attempt in the past 12 months</td>
<td>Percentage of current tobacco users who tried to quit during the past 12 months</td>
</tr>
<tr>
<td></td>
<td>Health care provider’s advice to quit using tobacco</td>
<td>Percentage of current tobacco users who visited a doctor or health care provider during the past 12 months and were advised to quit tobacco use</td>
</tr>
<tr>
<td>WARN</td>
<td>Awareness of anti-tobacco information in newspapers or magazines</td>
<td>Percentage of respondents who have noticed information about the dangers of tobacco use or that encourages quitting in newspapers or magazines in the last 30 days</td>
</tr>
<tr>
<td></td>
<td>Awareness of anti-tobacco information on television</td>
<td>Percentage of respondents who have noticed information on television about the dangers of tobacco use or that encourages quitting in the last 30 days</td>
</tr>
<tr>
<td></td>
<td>Noticing health warning labels on tobacco packages</td>
<td>Percentage of current tobacco users who noticed health warnings on tobacco packages in the last 30 days</td>
</tr>
<tr>
<td></td>
<td>Thinking of quitting because of health warning labels on tobacco packages</td>
<td>Percentage of current tobacco users who reported thinking about quitting tobacco use in the last 30 days because of the warning labels on tobacco packages</td>
</tr>
<tr>
<td>ENFORCE</td>
<td>Awareness of tobacco advertising in stores</td>
<td>Percentage of respondents who have noticed any advertisements or signs promoting tobacco products in stores where tobacco products are sold in the last 30 days</td>
</tr>
<tr>
<td></td>
<td>Awareness of specific types of tobacco promotions</td>
<td>Percentage of respondents who noticed (free samples of tobacco products, tobacco products at sales prices, coupons for tobacco products, free gifts or discounts on other products when buying tobacco products, clothing or other items with a tobacco product brand name or logo, tobacco product promotions in the mail) in the last 30 days</td>
</tr>
<tr>
<td>RAISE</td>
<td>Cost of manufactured tobacco products</td>
<td>Average amount spent on a pack of manufactured tobacco products (in local currency)</td>
</tr>
<tr>
<td></td>
<td>Tobacco product affordability</td>
<td>Average cost of 100 packs of manufactured tobacco products as a percentage of Gross Domestic Product (GDP) per capita</td>
</tr>
</tbody>
</table>
• Current tobacco users: Percentage of respondents who currently use any tobacco products (smoked and smokeless)
• Current tobacco smokers: Percentage of respondents who currently smoke any tobacco products
• Daily tobacco smokers: Percentage of respondents who currently smoke tobacco products daily
• Current smokeless tobacco users: Percentage of respondents who currently use smokeless tobacco
• Daily smokeless tobacco users: Percentage of respondents who currently use smokeless tobacco daily

Protect:
• Exposure to second-hand smoke at home: Percentage of respondents who report that smoking occurs inside their home
• Exposure to second-hand smoke at work: Percentage of indoor workers who were exposed to tobacco smoke at work in the past 30 days

Offer:
• Tobacco use quit attempt in the past 12 months: Percentage of current tobacco users who tried to quit during the past 12 months
• Health care provider’s advice to quit using tobacco: Percentage of current tobacco users who visited a doctor or health care provider during the past 12 months and were advised to quit tobacco use

Warn:
• Awareness of anti-tobacco information in newspapers or magazines: Percentage of respondents who have noticed information about the dangers of tobacco use or that encourages quitting in newspapers or magazines in the last 30 days
• Awareness of anti-tobacco information on television: Percentage of respondents who have noticed information on television about the dangers of tobacco use or that encourages quitting in the last 30 days

• Noticing health warning labels on tobacco packages: Percentage of current tobacco users who noticed health warnings on tobacco packages in the last 30 days

• Thinking of quitting because of health warning labels on tobacco packages: Percentage of current tobacco users who reported thinking about quitting tobacco use in the last 30 days because of the warning labels on tobacco packages

Enforce:

• Awareness of tobacco advertising in stores: Percentage of respondents who have noticed any advertisements or signs promoting tobacco products in stores where tobacco products are sold in the last 30 days

• Awareness of specific types of tobacco promotions: Percentage of respondents who noticed [free samples of tobacco products, tobacco products at sales prices, coupons for tobacco products, free gifts or discounts on other products when buying tobacco products, clothing or other items with a tobacco product brand name or logo, tobacco product promotions in the mail] in the last 30 days

Raise:

• Cost of manufactured tobacco products: Average amount spent on a pack of manufactured tobacco products (in local currency)

• Tobacco product affordability: Average cost of 100 packs of manufactured tobacco products as a percentage of Gross Domestic Product (GDP) per capita

Source: Adapted from TQS. Tobacco questions for surveys: a subset of key questions from the Global Adult Tobacco Survey (GATS), second edition. Atlanta: Centers for
Other Types of Collection

Dr. Kosen discusses other types of data collection.

The data from population surveys often needs to be augmented with other types of data collection. Some of these approaches are less time, resource, and effort-intensive than population surveys, and can yield information relatively quickly. This may be crucial because quick feedback on policy implementation is needed to help guide policy fine-tuning and revision, as well as identifying and closing policy gaps.

Learn what these other types of data collection are.

- Observational studies of enforcement practices
- Focus group and key informant interviews
- Environmental studies to corroborate policy enforcement (for example, to assess compliance with smoke-free laws, air sampling studies can be done to determine mean levels of tobacco-related particulate matter)
- Biologic measures to confirm enforcement, such as measuring cotinine (chemical-derived nicotine) levels and other markers of secondhand smoke exposure in bar and restaurant workers

Data Collection Approaches

Dr. Kosen discusses approaches to data collection.

One practical approach would be to identify a series of data sources and data collection methodologies that comprise core (or mandatory), expanded, and advanced approaches. Thus, countries can tailor data collection based on the level of capacity and resources available to them. All countries should implement core monitoring measures, and add on expanded and advanced measures when resource levels and monitoring capacity increase.
Learn more about examples of core, expanded, and advanced approaches to data collection for assessing compliance to smoke-free legislation.

### EXAMPLES OF CORE, EXPANDED AND ADVANCED MONITORING OF EXPOSURE TO TOBACCO SMOKES

<table>
<thead>
<tr>
<th>Core</th>
<th>Expanded</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct observation</strong></td>
<td>Measuring airborne nicotine levels</td>
<td>Measuring cotinine levels</td>
</tr>
<tr>
<td>Inspections of smoke-free public places</td>
<td>Objective measurement of airborne nicotine levels through use of detection monitors at a representative number of public places</td>
<td>Measurement of cotinine in urine, saliva or blood samples of a representative sample of the population</td>
</tr>
<tr>
<td>and workplaces</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Self-reported exposure questionnaires</strong></td>
<td>Measuring particulate matter</td>
<td>N/A</td>
</tr>
<tr>
<td>Include questions on exposure to second-hand smoke in national or subnational surveys</td>
<td>Measuring particulate matter can be an indication of the level of exposure to second-hand tobacco smoke</td>
<td></td>
</tr>
</tbody>
</table>

A table compares the core, expanded, and advanced monitoring of exposure to tobacco smoke. An accessible version is provided here:
smoke in national or subnational surveys | indication of the level of exposure to second-hand tobacco smoke |
---|---|


**Direct Observation**

Dr. Kosen discusses direct observation.

Direct observation is a core data collection strategy to assess tobacco control policy compliance. It is simple, can be readily done with minimal training, inexpensive, and easy to replicate in multiple sites. However, in some cases, having additional data from environmental and biologic marker studies can provide a more compelling case to legislators and the community for strengthening existing policies and closing gaps.

For instance, demonstrating measurable levels of blood or urine cotinine in non-smoking bar workers provides a powerful argument for stepping up the enforcement of smoke-free laws.

**Quiz**

True or False? The data from population surveys often needs to be isolated from other types of data collection.

- true
- false

**Answer**

False: The data from population surveys often needs to be augmented with other types of data collection. Some of these approaches are less time, resource, and effort-intensive than population surveys, and can yield information relatively
quickly. This may be crucial because quick feedback on policy implementation is needed to help guide policy fine-tuning and revision, as well as identifying and closing policy gaps.

**Case Study: Smoke-free Compliance—Turkey**

**The situation**

Turkey enacted smoke-free public places legislation in 2008 and expanded the coverage to include hospitality venues in 2009. A mechanism was needed to assess compliance with the law.

**The response**

Using the observational protocol outlined in the smoke-free compliance guide developed by Bloomberg partners, researchers assessed compliance with the smoke-free law in 12 cities between December 2012 and July 2013.

*Smoke-Free Compliance Guide*

**The result**

They observed a total of 898 venues, 4,395 indoor locations (mean five locations/venue), 39,936 people (mean 44 persons/venue), and 356 taxi rides. Compliance with the legislation was generally high, ranging from 97% in universities to 76% in hospitality venues. The study pinpointed a need to focus on enforcing compliance in hospitality venues, especially bars/nightclubs, in taxi cabs, and in locations within universities, schools, government buildings, malls, and hospitals where smoking was observed, especially dining areas.

**Case Study: Health Warning Label (HWL) Compliance—TPackSS**

**The situation**

Few countries have monitored compliance with HWL legislation.

**The response**
The Tobacco Pack Surveillance System (TPackSS) is a surveillance study that documents systematically a census of tobacco packs available on the market in the 14 LMICs where more than two-thirds of the world’s smokers live: Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Pakistan, the Philippines, Russia, Thailand, Turkey, Ukraine, and Vietnam.

TPackSS: Tobacco Pack Surveillance System

Using data from TPackSS, researchers assessed the extent of compliance with 14 countries’ HWL requirements. HWL compliance codebooks were developed for each country based on the details of country-specific HWL requirements, with up to four common compliance indicators assessed for each country (location, size, label elements, and text size). Packs (n = 1,859) were double coded for compliance. Compliance was examined by country and pack characteristics, including parent company and brand family. This pack total number only included cigarette packs with the most current health warning labels in each country.

HWL Codebooks

The result

Overall, 72% of coded cigarette packs were compliant with all relevant compliance indicators, ranging from 17% in the Philippines to 94% in Mexico. Compliance was highest for location of the warning (ranging from 75%–100%) and lowest for warning size (ranging from 46%–99%). Compliance was higher for packs bought in high SES neighborhoods, and varied by parent company and brand family.

This multi-country study found at least one pack in every country—and many packs in some countries—that were not compliant with key requirements for HWLs in the country of purchase. The study concluded that non-compliance may be exacerbating health disparities, and tobacco companies should be held accountable for complying with country HWL requirements.

Do cigarette health warning labels comply with requirements: A 14-country study

Case Study: TAPS Compliance—Russia

The situation
Russia enacted legislation to ban tobacco point-of-sale (POS) advertising, effective November 15, 2013, and banned the display of tobacco and the sale of cigarettes in kiosks, effective June 1, 2014. The tobacco control community needed a means to assess the degree of compliance with the POS advertising ban.

**The response**

Researchers conducted two waves of observations to measure compliance with the POS restrictions: wave 1 took place in April-May 2014 after the advertising ban was in effect; wave 2 occurred in August-September 2014 after the display ban and elimination of tobacco sales in kiosks came into effect. Observations were conducted by local trained staff that traveled to five cities in different regions of Russia (Moscow, St. Petersburg, Kazan, Ekaterinburg, and Novosibirsk). Observations were conducted in a roughly equal number of supermarket chains, convenience stores, and kiosks. Observations were made in 780 venues in wave 1 and in 779 revisited venues in wave 2. Observed items included advertising at POS, product displays, and cigarette sales in kiosks.

**The Development and Piloting of a Mobile Data Collection Protocol to Assess Compliance With a National Tobacco, Advertising, Promotion, and Product Display Ban at Retail Venues in the Russian Federation**

**The result**

Compliance with the POS ban was good overall, but the use of brand colors or images and sales of tobacco in kiosks continued despite the law. This study highlighted gaps in compliance where enforcement needed strengthening.

**Case Study: Monitoring Tobacco Pack Prices—TPackSS**

**The situation**

Despite increases in tobacco taxes—increases intended to raise the price of tobacco products—many of these products remain affordable, especially in low- and middle-
income countries (LMICs). The prevalence of an illicit supply of tobacco products complicates the ability of tax increases to raise consumer prices sufficiently so that consumption is reduced.

**The response**

A total of 3,240 cigarette packs were purchased (range = 58 packs in Egypt to 505 in Russia) in formal retail settings in three major cities in each of these 14 LMICs. Packs were categorized as ‘legal’ or ‘illicit’ based on the presence of a health warning label from the country of purchase and existence of a tax stamp; 2,468 legal and 772 illicit packs were in the analysis. This pack total number included packs with old health warning labels, foreign health warning labels, or no health warning labels.

**The result**

The difference in median price between legal and illicit packs as a percentage of the price of legal packs ranged from 32% in Philippines to 455% in Bangladesh. Median purchase price of illicit cigarette packs was higher than that of legal cigarette packs in six countries (Bangladesh, India, Pakistan, Philippines, Thailand, and Vietnam). Median purchase price of illicit packs was lower than that of legal packs in Turkey, Ukraine, and China. This represents the first study to assess systematically the relationship between price and pack legality in multiple LMICs using a standard protocol and actual purchase price data.

*An analysis of purchase price of legal and illicit cigarettes in urban retail environments in 14 low- and middle-income countries*

**Evaluating Tobacco Control Policies**

Dr. Kosen discusses evaluating tobacco control policies.

A comprehensive tobacco control monitoring system tracks not only the numbers and characteristics of policies that are enacted, and how well these policies are enforced and complied with, but also the intended and unintended outcomes and impacts of these policies on individual and population behaviors. Thus, evaluating tobacco control policies is an integral component of policy monitoring.
In 2012, the International Agency for Research on Cancer (IARC) convened a working group of international tobacco control experts to propose a framework for guiding the evaluation of tobacco control policies in response to the WHO FCTC. The result was a Handbook that covers how the effects of a policy are determined, the core constructs for understanding how and why a given policy works, what potential elements can affect how a policy is implemented, and the data sources that might be useful for evaluation.

Access the IARC website. You can find the Handbook on this website.

IARC Publications

Evaluating a Policy’s Effectiveness

In general, when evaluating a tobacco control policy, three critical questions need to be addressed.

Learn about these three critical questions.

- Does the policy have any impacts?
- If it has an impact, under what conditions do the impacts occur, and who is impacted/not impacted? This includes any unintended consequences.
- How are the impacts achieved?

Logic Models

Dr. Kosen discusses logic models.

In evaluation, it is essential to have a solid conceptual model of how the policy is able to create impacts. This logic model framework establishes the causal pathway describing how a policy affects behavior and environment, and helps determine the evaluation design.

A logic model delineates key constructs and guides the selection of their corresponding measures/indicators, which in turn, can inform the choice of data sources.
IARC Logic Model

Dr. Kosen discusses the IARC logic model.

This logic model postulates that a policy has intended effects on specific population groups—the targeted policy outcomes. In the process of implementation, there are factors that are specific to the policy (e.g., capacity of policy enforcers, extent of media campaigns to mobilize support for policy) and general factors (e.g., social norms that determine acceptability of tobacco use, population awareness of tobacco’s harms) that can modify and affect the intended outcomes; these are mediators.

External factors (e.g., changes in leadership) can also affect how a policy is implemented and alter its efficacy in achieving intended outcomes; these are moderators. Also, the process of implementing the policy can give rise to unintended effects (e.g., tobacco industry strategies in response to a policy).

This is a general logic model proposed by the IARC working group.

A logic model is shown. In the top row, a large rectangular box reads: Incidental effects. A middle row has four boxes. The first box in the middle row reads: Policy as implemented. An arrow points to the second box. An arrow also points up to the Incidental effects box. The second box reads: Policy-specific mediators. An arrow points to the third box. An arrow also points up to the Incidental effects box. The third box reads: General mediators. An arrow points to the fourth box. An arrow
also points up to the Incidental effects box. The fourth box reads: Targeted policy outcomes.

In the bottom row, a large rectangular box reads: Moderators. Three arrows point from the Moderators box to the middle row of the logic model.

Source: International Agency for Research on Cancer (IARC).

Policy Evaluation: Study Designs

See some study designs utilized in policy evaluation.

- Pre- and post-policy measurement of specific indicators
- Repeat cross-sectional studies before and after policy implementation
- Longitudinal studies with multiple points of data collection across the same study population before and after policy implementation (unlike repeat cross-sectional studies, where data collection occurs periodically across a changing population, in longitudinal studies the same study population is followed over time)
- Effect modeling studies

Case Study: The International Tobacco Control Policy Evaluation (ITC) Project

The situation

While evaluation of tobacco control policy implementation is vital, many countries do not possess the resources or capacity to conduct this on their own.

The response

The International Tobacco Control Policy Evaluation Project (the ITC Project) is an international research program that systematically evaluates key policies of the WHO Framework Convention on Tobacco Control (FCTC) at the population level. The ITC Project is a collaborative effort with international health organizations and policymakers conducted in 29 countries and includes over 150 tobacco control collaborators.
In each country, the ITC Project conducts longitudinal cohort surveys to assess the impact and identify the determinants of effective tobacco control policies in each of the following areas:

- Health warning labels and package descriptors
- Smoke-free legislation
- Pricing and taxation of tobacco products
- Communication and education
- Cessation
- Tobacco advertising and promotion

A key objective of the ITC Project is to promote strong evidence-based policies under the FCTC through rapid translation of knowledge to the global tobacco control community.

**The result**

The ITC Project knowledge translation program reaches researchers, policymakers, and advocacy groups through scientific journal papers, presentations at scientific meetings, results dissemination workshops, country-specific National Reports, FCTC policy-specific reports, cross-country comparison reports, and high profile media coverage of project findings. The project also maintains a repository of all of its research findings on its website.

Select the link to access the ITC website.

[ITC](#)

**Summary**

Dr. Kosen summarizes the Monitoring Tobacco Control Policies and Interventions Lecture.

Tobacco control surveillance should include monitoring tobacco control policies, their scope and characteristics in relation to good practice standards, assessing compliance with these policies and evaluating the outcomes and impacts of the policies on individual and population behavior, and the environment.
Want to Learn More?

Learn about four examples of Institute for Global Tobacco Control tools and methods to evaluate and conduct surveillance of tobacco control policies:

IGTC

Read about methods for evaluating tobacco control policies from IARC:

IARC Publications

The latest WHO FCTC global progress reports:

FCTC Global progress reports page:

FCTC: Global Progress Reports

The Institute for Global Tobacco Control has existing resources on indicators and how to assess compliance with several tobacco control policies:

- Assessing Compliance with Tobacco Advertising, Promotion, and Sponsorship Bans: A "How-to" Guide for Observing the Internet, Sponsored Events, and Corporate Social Responsibility (CSR) Key Indicators of Success: Smoke-free: What Does Success Look Like?

Emerging Issues

Introduction

Dr. Mira B. Aghi, Board Member, Chair of Tobacco Control, the International Union Against Tuberculosis and Lung Disease (The Union), introduce the Emerging Issues Lecture.
Surveillance is a fundamental component of tobacco control. Today, the process of surveillance is changing and adapting to take advantage of the technological innovations in how we collect, analyze, and disseminate data and information.

In this section, you will learn about some of the emerging issues and approaches to monitoring and evaluating tobacco control policies and programs using the diverse information technologies that are now available.

**Learning Objectives**

- Identify some of the new approaches to monitoring the tobacco epidemic and tobacco control policies and practices, using electronic communications platforms.
- Describe examples of surveillance mechanisms for tobacco policy monitoring and evaluation that utilize modern information technologies.

**Mobile Technology**

Dr. Aghi discusses mobile technology.

The use of mobile and wireless technologies has seen explosive growth over the past decade. The International Telecommunication Union (ITU) estimates that there are now close to 5 billion mobile phone subscriptions in the world, over 70% of them reside in low- and middle-income countries and over 85% of the world’s population is now covered by a commercial wireless signal.

Moreover, youth are at the forefront of digital communications, with 70% of the world’s youth now online. Other institutions, such as GSMA Intelligence, a market research agency focused on tracking mobile usage globally, have even higher estimates of global mobile utilization. In its 2018 Report, GSMA Intelligence stated that over 5 billion people—two-thirds of the world’s population—had mobile subscriptions by the end of 2017.

Learn about mobile technology as it relates to gender.

One caveat regarding mobile technology’s reach relates to gender: worldwide, women are less likely to own a mobile phone and to have access to the Internet,
with the largest gaps in low- and middle-income countries (LMICs). In LMICs, a woman is 10% less likely to own a mobile phone and 26% less likely to use the Internet. This has led the International Telecommunications Union to highlight increasing mobile phone uptake among women in LMICs as a development priority.

**Mobile Technology and mHealth**

Dr. Aghi discusses mobile technology and mHealth.

The broad reach of mobile technology, its widespread availability across the majority of the world’s population, and the speed and ease of its use for transmitting data have prompted the creation of “mHealth,” broadly defined as “medical and public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants (PDAs), and other wireless devices.” Among the various categories of health functions that could be served by mobile technologies are data collection through electronic health surveys and epidemiological surveillance.

Yet, mobile technologies remain underutilized for data gathering and surveillance. A global WHO survey in 2009 discovered that the least frequently reported mHealth initiatives used by countries were health surveys, surveillance, awareness raising, and decision support systems.

Moreover, the use of mobile devices for health surveys was low in countries across all WHO regions, with the exception of the Region of the Americas. Interestingly, responding countries in the low-income group reported the highest activity of health survey initiatives; mHealth surveillance activity was more prevalent in countries in the low-income and lower-middle income groups than those in the higher-income groups, particularly in the African and South-East Asia Regions.

**Case Study: Global Adult Tobacco Survey (GATS)**

The situation
The tobacco epidemic requires periodic global surveillance, but ensuring data collection, data entry, and data management efficiency is a challenge when conducting paper surveys on a national scale across several countries.

**The response**

In tobacco control, one of the most prominent successes in incorporating mobile technologies into a large-scale health survey is the Global Adult Tobacco Survey or GATS. The original GATS questionnaire was pilot-tested using paper surveys in the Philippines and India in early 2007. The GATS partners decided to administer GATS electronically instead of by paper and pencil after reviewing the results of the pilot. An important reason for the decision was to help increase data quality by using a software program with features such as automated skip logic, range checks, and consistency checks, while also decreasing the time needed for data collection and processing.

RTI International was selected as the contractor to provide programming and information technology support. RTI’s General Survey System (GSS) software was used to program the GATS questionnaire handheld computers. GSS software was selected because it was designed to run on a Windows Mobile platform and had already been tested and implemented on a handheld computer.

The GATS electronic questionnaire was developed and tested from January through April 2008.

**The result**

GATS has collected data in over 400,000 household surveys in more than 50 languages across 28 countries, facilitated in large part by the use of mobile technology, with handheld computers to record data, and built-in software to streamline data collation (pulling together data from different sources), and processing.

**Internet Panels**

Dr. Aghi discusses Internet panels.
Traditional surveys with sample designs necessary to produce representative estimates of populations can be time- and cost-prohibitive. Internet-panel surveys are a potential means to quickly and cost-effectively collect health data, and may have potential utility for tobacco control data collection.

An online panel is a sample of persons who have agreed to complete surveys via Internet. These panels are very popular for market research, especially within the private sector. Panel members can be recruited in a number of ways.

<table>
<thead>
<tr>
<th><strong>Probability sample</strong></th>
<th><strong>Nonprobability sample</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Members recruited through random selection from addresses or telephone numbers.</td>
<td>Volunteers are recruited online in exchange for some form of compensation. Members are recruited from a set of respondents who go to a website and provide personal and demographic information that is used to select potential panel members for specific surveys. “River sampling” – respondents invited to participate in a survey on a flow basis as they visit specific websites.</td>
</tr>
</tbody>
</table>

**Internet Panels Are Nonprobability Samples**

The U.S. Pew Research Center only uses probability samples in its various online research projects. However, nonprobability samples dominate online research. Learn some strategies to reduce the bias from nonprobability samples.
Selecting respondents from within a panel to match the demographic make-up of the intended population

Applying a weighting formula to the respondent pool so it matches the intended population on relevant demographic variables

**Case Study: Measure Perceptions of E-cigarettes in Three Metropolitan Areas in the United States**

**The situation**

Emerging public health issues, such as e-cigarette use, often require rapid data collection to identify changing trends, patterns of use, and public perceptions at the local level, to help guide the strategic design of prevention interventions. However, traditional surveys with sample designs to produce representative estimates of local communities can be time-consuming and costly.

**The response**

In 2015, a global consulting services company pilot-tested the use of Internet panel surveys to measure perceptions of e-cigarettes in Cleveland, Ohio; New York, New York; and Seattle, Washington. More than 500 people responded to the survey in each city. They compared weighted unadjusted prevalence estimates from the Internet-panel data with estimates from the 2014 Health Information National Trends Survey (HINTS) for the following question in each survey: “Compared to smoking cigarettes, would you say that electronic cigarettes are...much less harmful, less harmful, just as harmful, more harmful, much more harmful, or I've never heard of electronic cigarettes.” Using multivariable logistic regression, they compared associations of respondents’ demographic and health characteristics with perceived harm from e-cigarettes.

**The result**

The prevalence of the perception that e-cigarettes are less harmful than smoking cigarettes ranged from 35.9% to 39.9% in the Internet-panel sites and was 43.0% in HINTS. Most patterns of beliefs and respondent characteristics in the Internet-panel...
data were consistent with patterns in HINTS. However, they found inconsistent patterns between Internet-panel sites and HINTS by race/ethnicity and education. The feasibility study concluded that Internet-panel surveys could quickly produce community-level data for targeted public health interventions and evaluation, but they may be limited in producing estimates among subgroups.

Adapting Existing Surveys to Address New and Emerging Tobacco Products

Dr. Aghi discusses adapting existing surveys to address new and emerging tobacco products.

Tobacco use is a moving target; new products continue to emerge as the tobacco industry attempts to compensate for declines in smoking by developing alternatives to cigarettes. Current global and national tobacco surveillance systems tend to focus on traditional tobacco products, yet the rapidly changing nature of tobacco use products and patterns requires proactive adaptation of existing survey instruments to accurately capture the changing landscape of tobacco consumption.

Learn about several types of survey instrument adaptations.

- Surveys need to capture the ever-increasing range of tobacco products, both conventional and non-conventional. Moreover, the language of use evolves with product diversification. Survey measures need to address the descriptive language of target audiences in order to better capture the rates and patterns of use. This may require qualitative research and/or environmental scans of key messaging sources, including the Internet and social media, to understand these language subtleties. The challenge may be in harmonizing measures across surveys, across diverse socio-cultural contexts, and over time. In addition, pictures and graphics may be an important addition to all surveys. Pictures and graphics help to provide a visual standard that bypasses language limitations, and differences in verbal descriptions of new products and patterns of use across diverse communities and populations.
• Perceptions of harm may vary markedly across the diverse and growing range of tobacco products. The effect of these differences in how users see harm on smoking initiation and their likelihood of quitting can also inform policy and program development for tobacco control. Existing surveys need to make room to measure these potential differences in perceptions of harm.

• As the range of interventions increases in response to tobacco product diversification, survey questions on the impact and effect of interventions will also need to be adjusted.

Crowdsourcing

Dr. Aghi discusses crowdsourcing.

As a research technique, crowdsourcing offers an inexpensive, and relatively easy way to rapidly collect huge amounts of information from a large number of people, across different geographic and socio-cultural contexts. Current evidence indicates that crowd-sourced research is as accurate as traditional research methods.

However, not all issues are amenable to crowdsourcing, and quality control is a challenge. Also, maintaining confidentiality can be difficult, since data are posted online by various contributors.

Learn more about crowdsourcing as a research technique.

• Leverage large groups of people to gather information.
• Distribute large-scale tasks that are easier for humans to process (e.g., analyzing photos).
• Solicit ideas or solutions to existing problems as a challenge that can also be vetted by peers, using online networks and social media.

Case Study: In depth—Big Tobacco, Tiny Targets

The situation

Research coordinated by the Institute for Global Tobacco Control and NGO partners in at least 22 countries documented the aggressive marketing practices of the major
tobacco companies near primary and secondary schools. Tracking specific examples of tobacco advertisements around schools and places frequented by youth can be expedited using community-based participatory approaches that tap into readily available mobile technology.

**The response**

Campaign for Tobacco-Free Kids launched a new global campaign in March 2018—“Big Tobacco, Tiny Targets”—targeting Philip Morris International, British American Tobacco, and other tobacco companies whose products are being systematically promoted and routinely sold to kids around schools, playgrounds, and places frequented by young people.

Through crowdsourcing technology and social media, the campaign empowers citizens across the world to help document tobacco marketing that targets kids. With just a mobile phone, citizens in any country can take a photo of tobacco advertising near schools, playgrounds, and other kid-friendly venues and upload the data to the campaign hub. The information collected will be used to warn governments and spur them to ban all tobacco marketing.

**The result**

The campaign is a relatively new one, and an assessment of its impact will take time. However, an interactive website where anyone with access to a mobile phone and the Internet can upload digital photos of tobacco marketing that targets children and youth is operational. The website also contains resources that can be shared and used on social media to raise awareness and advocate for full enforcement of TAPS bans.

Access the Campaign for Tobacco-Free Kids website.

**Big Tobacco: Tiny Targets**

**Summary**

Dr. Aghi summarizes the Emerging Issues Lecture.
Advancements in information technology have opened up new and innovative ways to collect information, and conduct surveillance in tobacco control. The evidence base for the use of these approaches in surveillance and research is still accumulating, and most applications are still in the pilot-testing phase.

Exploring these novel methodologies for tobacco control surveillance will require careful analysis of the advantages versus the disadvantages, while determining their feasibility in strengthening the capacity of countries to monitor the tobacco epidemic and the impact of the various tobacco control policies and interventions.

Want to Learn More?

Learn about the various mHealth initiatives for tobacco control:

Tobacco Free Initiatives (TFI)

GATS Protocols and Guidelines:
TFI: GATS Protocols and Guidelines

GATS Atlas:
TFI: The GATS Atlas

Internet Panels:
Advantages and Disadvantages

Module Complete.