

Using Data to Amplify Tobacco Control Advocacy



Center for Public Health
Systems Science

Brown School



Washington
University in St. Louis



July 27, 2023

Speakers



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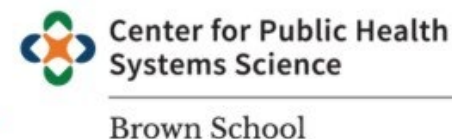
Zara Petkovic

Project Coordinator, Center for Public Health Systems Science, Brown School, Washington University in St. Louis



Moderator

Kelsey Romeo-Stuppy
Managing Attorney, ASH





Using Research Evidence to Advance Advocacy Examples from the International Tobacco Control Policy Evaluation Project (the ITC Project)

Geoffrey T. Fong, OC, PhD, FRSC, FCAHS
Dept of Psychology and School of Public Health Sciences, Univ of Waterloo
Ontario Institute for Cancer Research



ASH Webinar on Using Data for Advocacy
July 27, 2023



Disclosures and Funding in Past Five Years



- Member of the Expert Group for Article 9 (Regulation of the contents of tobacco products) and Article 10 (Regulation of tobacco product disclosures) of the WHO Framework Convention on Tobacco Control
- Member of the Brazil Health Regulatory Agency (ANVISA) Working Group on Tobacco Additives
- Member of the WHO Expert Group on COVID-19 and Tobacco Use
- Paid consultant for the Government of Singapore in the development of their Standardised Packaging measure.
- Grant support (as PI, MPI, or Co-I) from US National Cancer Institute (P01CA200512), NIDA (R21DA053614), Canadian Institutes of Health Research (FDN-148477), Ontario Institute for Cancer Research, New Zealand Health Research Council, Australia National Health and Medical Research Council (GNT1198301 & GNT2019252)
- No financial or other relationships with any pharmaceutical, medical, health, healthcare, or communications companies, including tobacco/nicotine companies.

Two major points

1. Research evidence is essential at every stage in the policy process

- A. To show the NEED for new policies or strengthening of existing policies
- B. To demonstrate that a particular policy can meet the need:
 - That the proposed new (or strengthened) policy is effective
 - That people (especially those affected by the policy) are supportive
- C. To provide responses to arguments against new policies or strengthening existing policies

2. The presentation of the research is important

- Present the numbers in the way that will make the most impact

The International Tobacco Control Policy Evaluation Project (the ITC Project)



Canada



United States



Australia



United Kingdom



Greece



Vietnam



Ireland



Thailand



Malaysia



Republic of Korea



Hungary



China



Uruguay



Mexico



New Zealand



Poland



France



Germany



Netherlands



Bangladesh



Romania



Brazil



Mauritius



Bhutan



India



Spain



Zambia



Kenya



Abu Dhabi



Japan



Israel

- Created in 2002 (prior to adoption of FCTC)
- 31 countries: >1/2 of world's population and >2/3 of world's tobacco users
- Merged methods and measures of behavioural sciences/psychology with sampling and methods of surveillance systems
- First-ever international cohort study of tobacco

1. Documenting the need for stronger policies: 2010—Canadian warnings need to be revised.

Federal tobacco strategy turns from
scary labels to stopping contraband

GLORIA GALLOWAY

Ottawa— From Tuesday's Globe and Mail

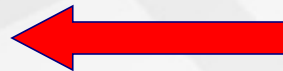
Published Tuesday, Sep. 28, 2010 3:00AM EDT

Last updated Monday, Jan. 10, 2011 1:26PM EST

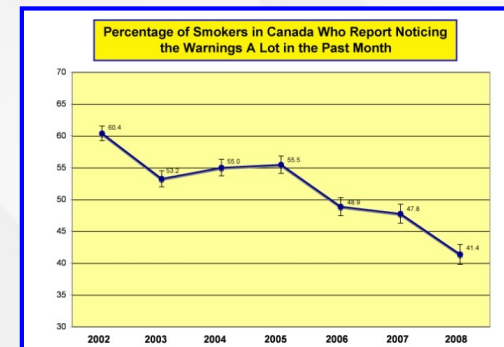


Sep 28, 2010: Canada announces that revision of the 10-year-old warnings will not continue

Dec 9, 2010: Hearing of the House of Commons Health Committee on the Govt's decision.



Dec 30, 2010: Health Minister reverses decision—revision of the warnings will continue.



ITC Canada Survey data show warnings have declined due to wear-out effects

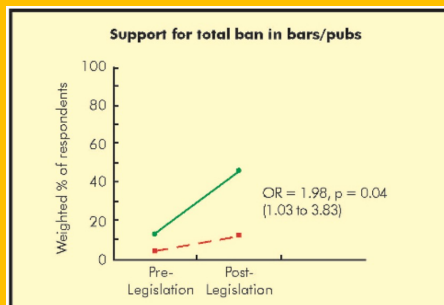
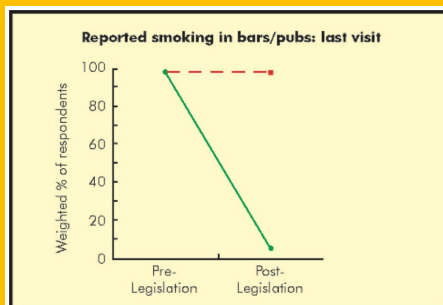
2. A new policy IS effective. Ireland's smoke-free law and the virtuous cycle of evaluation–dissemination–utilization

March 2004:

Ireland becomes the first country to implement a comprehensive smoke-free law (in the pubs, too!)

Dec 2003 and Dec 2004:

ITC pre-post national survey in Ireland, with comparison national survey in the UK

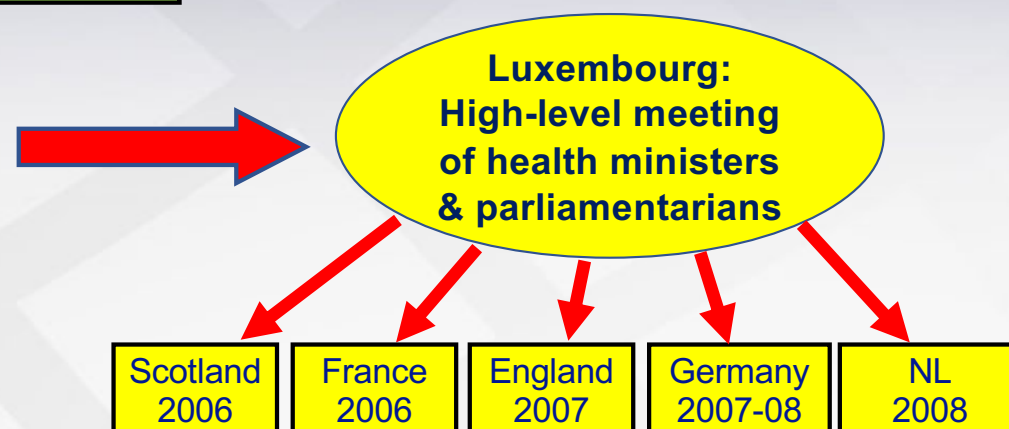


RESEARCH PAPER

Reductions in tobacco smoke pollution and increases in support for smoke-free public places following the implementation of comprehensive smoke-free workplace legislation in the Republic of Ireland: findings from the ITC Ireland/UK Survey

G T Fong, A Hyland, R Borland, D Hammond, G Hastings, A McNeill, S Anderson, K M Cummings, S Allwright, M Mulcahy, F Howell, L Clancy, M E Thompson, G Connolly, P Driezen

Tobacco Control 2006;15(Suppl III):iii51-iii58. doi: 10.1136/tc.2005.013649



Strong smoke-free laws lead to substantial reductions in secondhand smoke AND are supported by smokers

Comprehensive smoke-free laws lead to dramatic reductions in SHS

...and smokers support these laws after they are implemented...

FIGURE 7. Smoking prevalence in restaurants in seven ITC China cities from 2008 to 2012 compared with other countries before and after comprehensive smoke-free laws: Ireland (2004), Scotland (United Kingdom) (2006), France (2008), Germany (2007–2008), the Netherlands (2008), Mexico City (2008), other Mexican cities (2008) and Mauritius (2009)

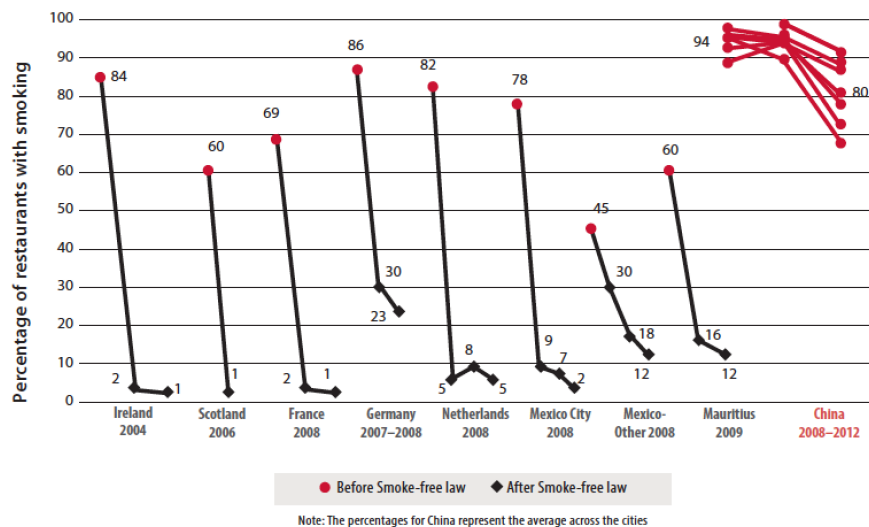
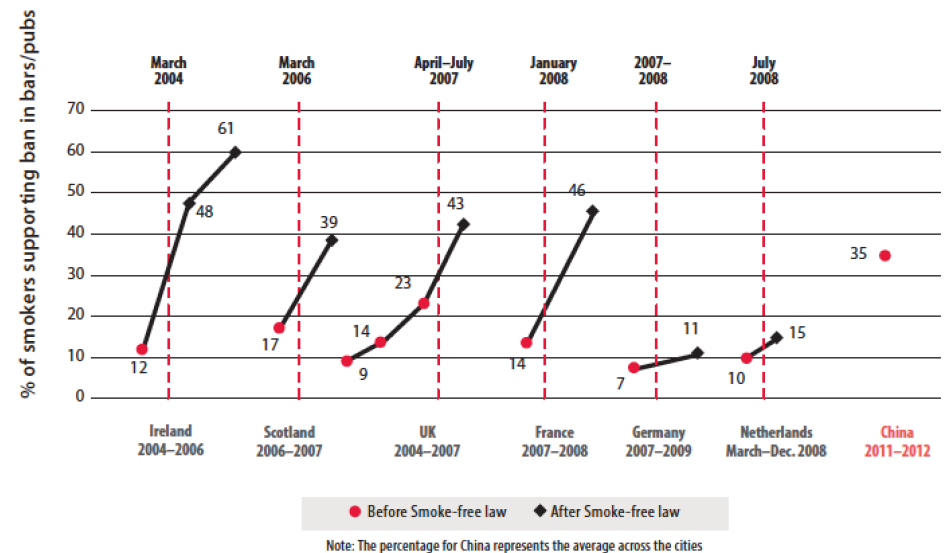


FIGURE 15. Support among smokers for bans in bars/pubs in China (2011–2012) compared with other countries



Using ITC evidence to demonstrate to policymakers that a stronger policy would be accepted by the public

World No Tobacco Day 2007

SMOKE-FREE ENVIRONMENTS

[Come Celebrate With Us](#)[PRINT](#)

[Register](#)

[Venue Information](#)

[Protection of Privacy](#)

[Contact Us](#)

[Call for Abstracts](#)

COME CELEBRATE WITH US

Join us on **May 28, 2007 from 8:00 a.m. to 4:30 p.m.** as the Alberta Alcohol and Drug Abuse Commission hosts the **World No Tobacco Day 2007 Provincial Celebration**. This one-day event offers the opportunity to share ideas, knowledge and successes, and to build partnerships among tobacco reduction stakeholders.

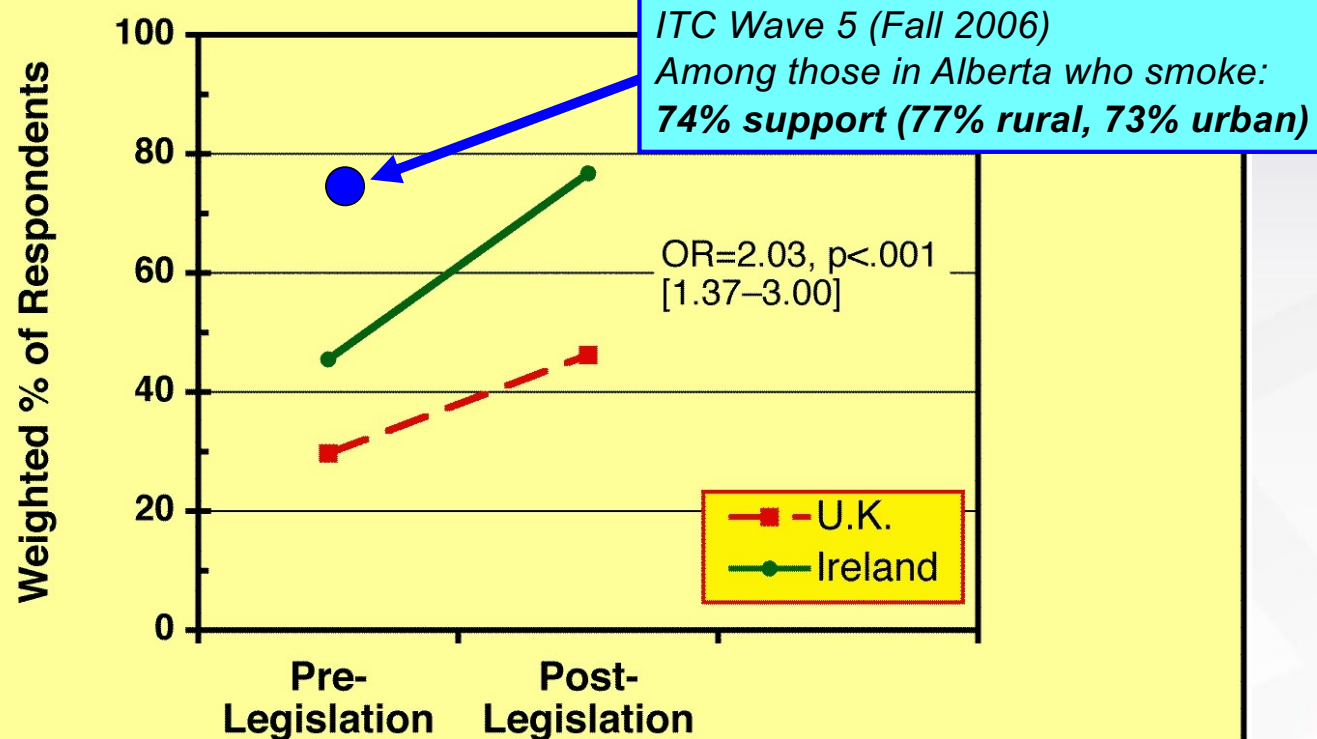
In recognition of the preventable harm caused by second-hand smoke, the theme for this year's celebration is "Smoke-Free Environments."

Geoffrey Fong, Ph.D., from the University of Waterloo will be delivering a keynote presentation on the positive impact of smoke-free laws on tobacco reduction efforts from a national and international perspective.

- Alberta's World No-Tobacco Day, May 2007
- Big issue: should Alberta enact a 100% smokefree law or only a partial law.
- Contacted advocates in Alberta about the obstacles to a 100% law
 1. Legislators were not sure support was high enough
 2. Rumor: the cities are pushing this law on the rural areas, who are NOT supportive (a "hot button" issue in Alberta)

Using ITC evidence to demonstrate to policymakers that a stronger policy would be accepted by the public

Support for Total Ban in Restaurants



Using ITC evidence to demonstrate to policymakers that a stronger policy would be accepted by the public

- Dave Hancock, the Health Minister of Alberta, was present at the event. Was interested in the findings. “Just what I need.”
- Next week—called Minister Hancock. He was in the caucus meeting discussing the smoke-free options. Sent the slides.
- Later that week, his caucus announced that they would propose a 100% smoke-free law.

BILL 45

ALBERTA PASSES ONE OF THE STRONGEST TOBACCO CONTROL LAWS IN CANADA

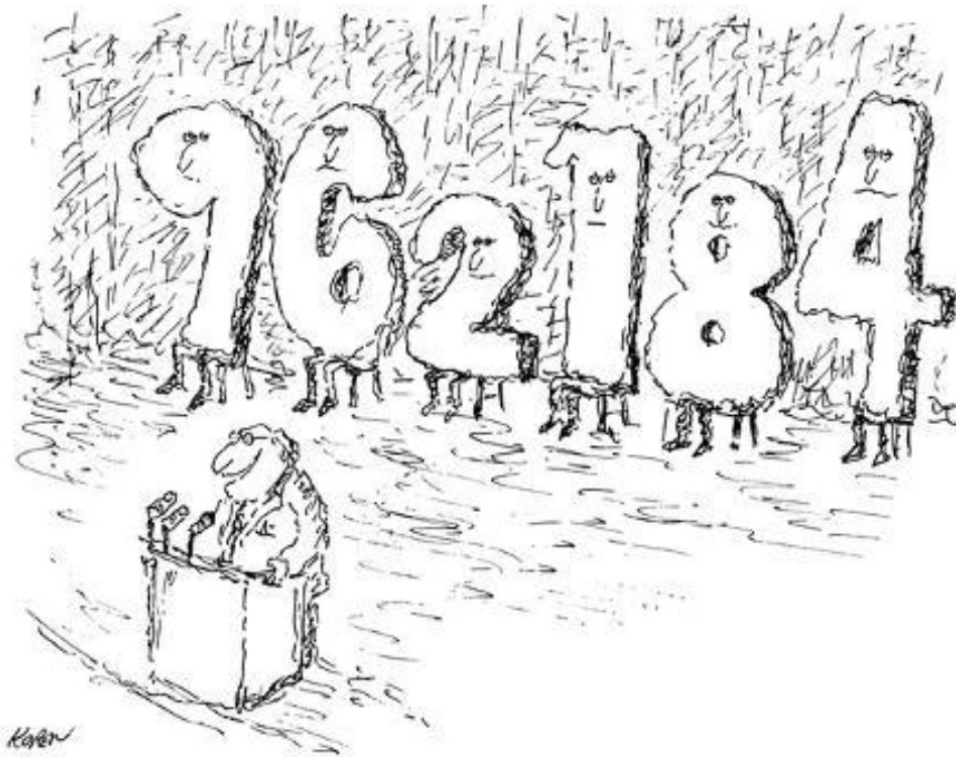
To find out more about smoke free places and Bill 45 click on smokefreeplaces.com.

Smoke-Free Places (Tobacco Reduction) Amendment Act, 2007

On November 14, 2007, Bill 45, the Smoke-free Places (Tobacco Reduction) Amendment Act, 2007 passed third and final reading.

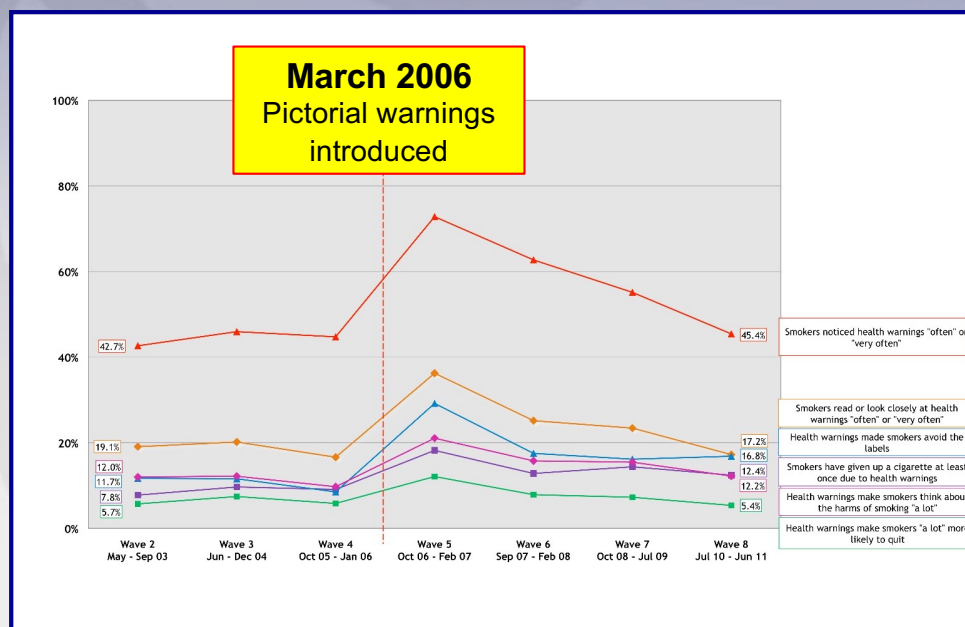
Once proclaimed, the Act will:

- Prohibit smoking in all public places and workplaces (proposed effective January 1, 2008);
- Ban tobacco displays, promotions and advertising in retail outlets (proposed effective July 1, 2008); and
- Remove tobacco sales from pharmacies, health care facilities and post-secondary campuses (proposed effective January 1, 2009).



"Tonight, we're going to let the statistics speak for themselves."

Graphic warnings significantly increase the effectiveness of warnings: Australia



Noticing pre = 43%
 Noticing post = 72%
Increase of 29%

Not smoking cig pre = 10%
 Not smoking cig post = 21%
Increase of 11%

Need to present the numbers in ways that are **powerful**

These findings are very impressive, but they are not vivid. Need to present them in a way that is more impressive to the public or policymakers

Noticing pre = 43%
Noticing post = 72%
Increase of 29%



**3 million smokers
in Australia**



**29% x 3 million =
870,000 smokers**

Not smoking cig pre = 10%
Not smoking cig post = 21%
Increase of 11%

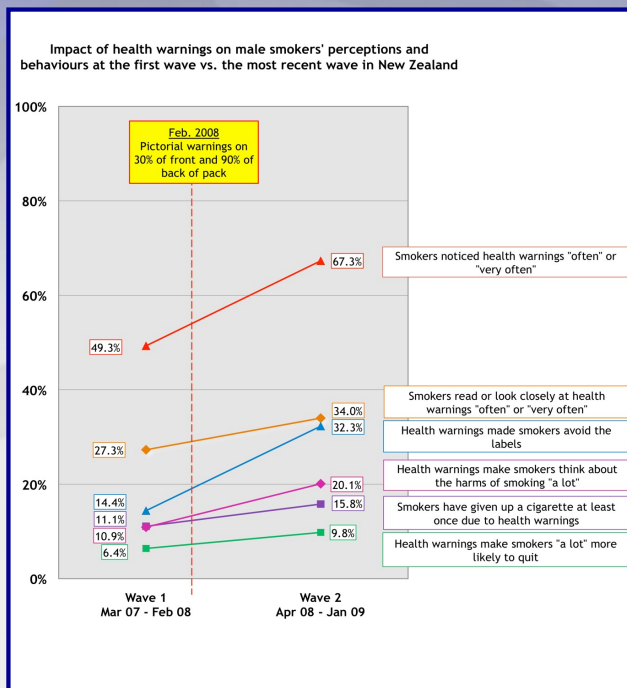


**11% x 3 million =
330,000 smokers**

**3 million smokers in Australia:
After the introduction of pictorial warnings:**

- 870,000 more smokers noticed the warnings
- 330,000 more smokers reported not smoking a cigarette because of the warnings

New Zealand: impact of graphic warnings



Noticing pre= 49.3%
Noticing post= 67.3%
Increase of 18.0%

Forgoing cig pre = 10.9%
Forgoing cig post = 15.8%
Increase of 4.9%

650,000 smokers in New Zealand
After the introduction of pictorial warnings:
117,000 more smokers noticed the warnings
30,550 more smokers reported forgoing a cigarette because of the warnings

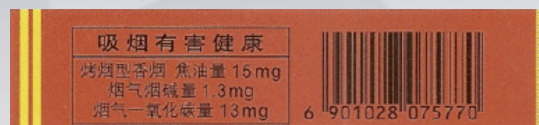
In 2008, China & Malaysia had the same poor text-only warnings...

The lower effectiveness of text-only health warnings in China compared to pictorial health warnings in Malaysia

Tara Elton-Marshall,^{1,2} Steve Shaowei Xu,³ Gang Meng,³ Anne C K Quah,³ Genevieve C Sansone,³ Guoze Feng,⁴ Yuan Jiang,⁴ Pete Driezen,³ Maizurah Omar,⁵ Rahmat Awang,⁵ Geoffrey T Fong^{3,6,7}

Tobacco Control (2015); 24: iv6-iv13.

2009
China stayed text-only



2009
Malaysia went to graphic

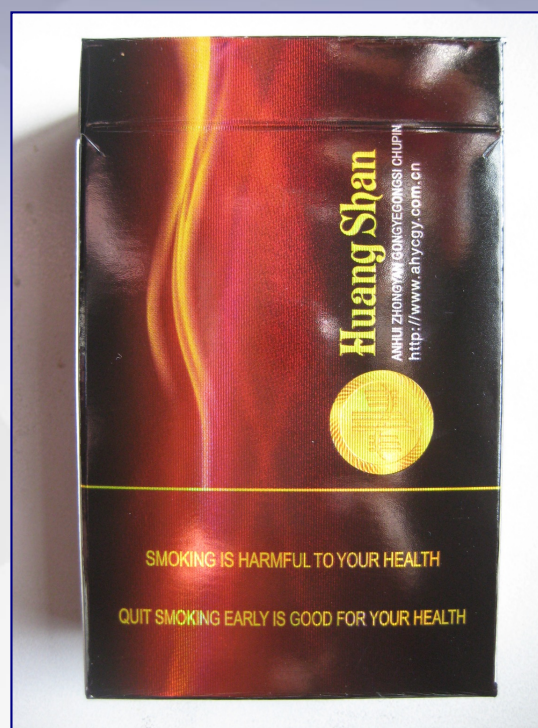


China's 2009 warnings: front and back

Front of pack

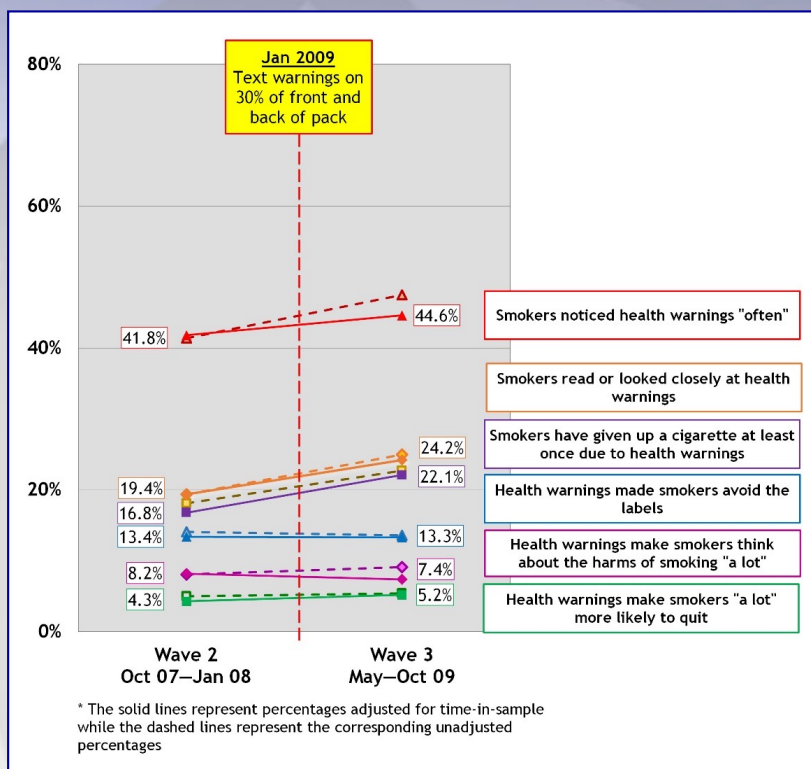


Back of pack



**Warnings appeared in English
on the back of every pack!!**

ITC Evaluation: China's Jan 2009 Text-Only Revision

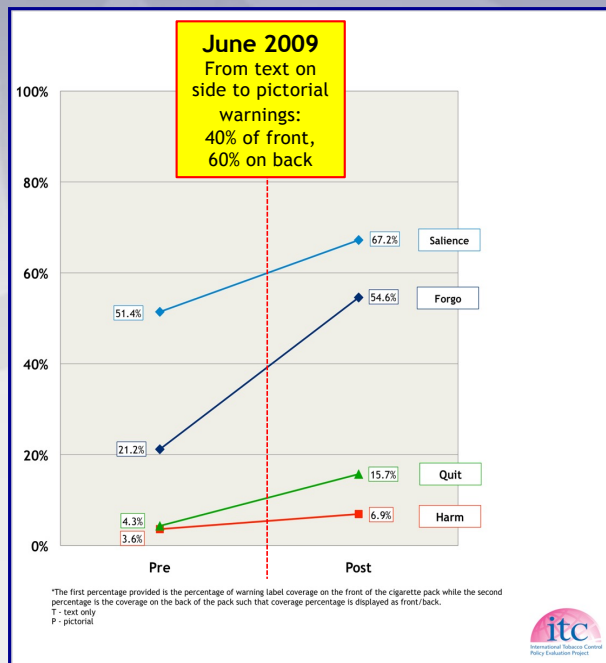


Noticing pre = 41.8%
Noticing post = 44.6%
Increase of 2.8%

Forgoing cig pre = 16.8%
Forgoing cig post = 22.1%
Increase of 5.3%

300 million smokers in China:
8.4 million more smokers noticed the warnings
15.9 million more smokers reported forgoing a cigarette because of the warnings

Malaysia: June 2009—impact of graphic warnings was much greater

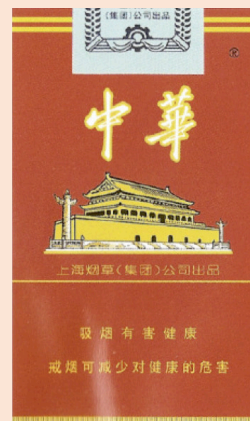
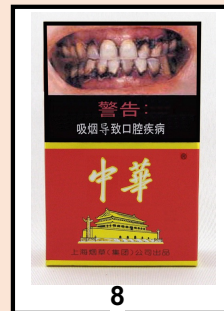
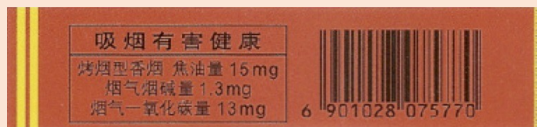


Noticing pre = 51.4%
Noticing post = 67.2%
Increase of 15.8%

Not smoking cig pre = 21.2%
Not smoking cig post = 54.6%
Increase of 33.4%

3.6 million smokers in Malaysia
After the introduction of pictorial warnings:
569,000 more smokers noticed warnings
1,202,400 more smokers reported not smoking a cigarette because of warnings

China's missed opportunity by NOT implementing graphic warnings



Malaysia Noticing = +15.8%
China Noticing = +2.8%
Difference = 13.0%

Malaysia Forgoing = +33.4%
China Forgoing = +5.3%
Difference = 28.1%

Multiply THESE differences by 300M
That's the missed opportunity

If China implemented Malaysia's graphic warnings...

13.0% x 300M = **39.0 million more smokers** would have
noticed the warnings often

28.1% x 300M = **84.3 million more smokers** would have reported that the
**warnings had stopped them from smoking a cigarette
at least once**

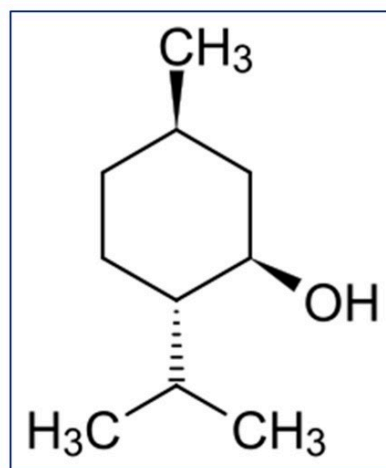
8.4% x 300M = **25.2 million more smokers** would have
read the warnings closely

4.4% x 300M = **13.2 million more smokers** would have reported that the
**warnings made them think about the health risks of
smoking**

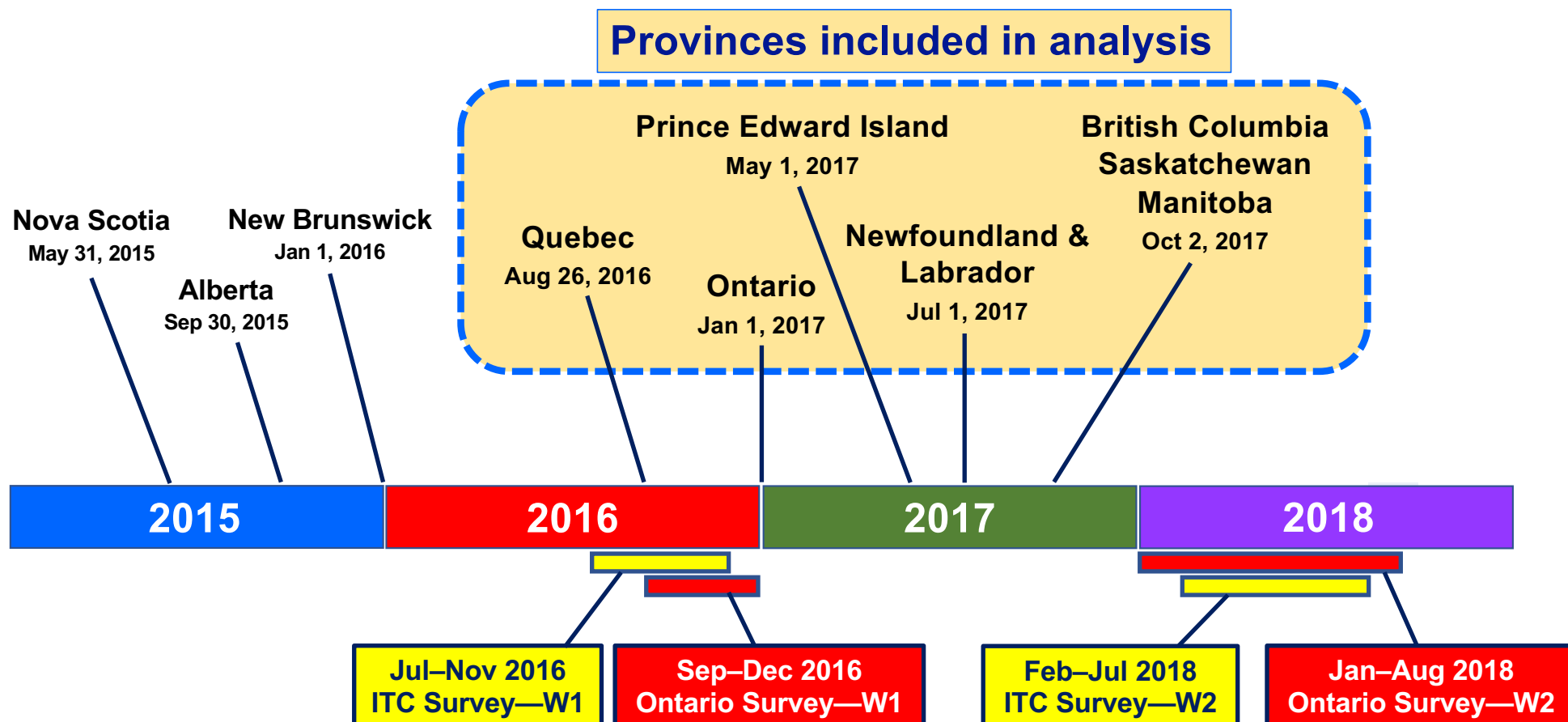
7.7% x 300M = **23.1 million more smokers** would have reported that the
warnings made them think about quitting



Menthol



Pre-post evaluation in 7 provinces (83% of Canada)




Two evaluation studies conducted in parallel

Evaluating the impact of menthol cigarette bans on cessation and smoking behaviours in Canada: longitudinal findings from the Canadian arm of the 2016–2018 ITC Four Country Smoking and Vaping Surveys

Janet Chung-Hall ¹, Geoffrey T Fong ^{1,2,3}, Gang Meng,¹
K Michael Cummings ⁴, Andrew Hyland,⁵ Richard J O'Connor,⁵
Anne C K Quah ¹, Lorraine V Craig ¹

Ban on menthol-flavoured tobacco products predicts cigarette cessation at 1 year: a population cohort study

Michael O Chaiton ^{1,2}, Ioana Nicolau,^{1,2} Robert Schwartz,² Joanna E Cohen,³
Eric Soule,⁴ Bo Zhang,^{2,5} Thomas Eissenberg⁶

**ITC Canada Survey: 1,236 smokers
across 7 provinces including Ontario**

**Ontario Menthol Ban Survey:
1,084 smokers in Ontario**

**Pooled analysis
(2,320 smokers,
including 423 menthol smokers)**

Both studies had very similar cohort design, methods, and measures, and timing of pre- and post-surveys was nearly identical, so appropriate to combine the data in a pooled analysis

Findings of the pooled analysis: article in *Tobacco Control*



Published on-line – April 28, 2022 in
Tobacco Control...

Original research



OPEN ACCESS

Impact of Canada's menthol cigarette ban on quitting among menthol smokers: pooled analysis of pre-post evaluation from the ITC Project and the Ontario Menthol Ban Study and projections of impact in the USA

Geoffrey T Fong^{1,2,3}, Janet Chung-Hall¹, Gang Meng¹, Lorraine V Craig¹, Mary E Thompson⁴, Anne C K Quah¹, K Michael Cummings⁵, Andrew Hyland⁶, Richard J O'Connor⁶, David T Levy⁷, Cristine D Delnevo⁸, Ollie Ganz⁸, Thomas Eissenberg⁹, Eric K Soule¹⁰, Robert Schwartz¹¹, Joanna E Cohen¹², Michael O Chaiton¹³

...Same day as the
FDA announces a
proposed rule to ban
menthol as a
characterizing flavor
in cigarettes
(with a parallel rule to
ban menthol in cigars)

Collaborators/Co-Authors:

ITC Project: Janet Chung-Hall, Gang Meng, Lorraine Craig, Mary Thompson, Anne CK Quah, Michael Cummings, Andy Hyland, Richard O'Connor, David Levy

Ontario Menthol Ban Study: Michael Chaiton, Rob Schwartz, Joanna Cohen, Tom Eissenberg, Eric Soule

Rutgers Center for Tobacco Studies: Cris Delnevo, Ollie Ganz



FEDERAL REGISTER

The Daily Journal of the United States Government



Proposed Rule

Tobacco Product Standard for Menthol in Cigarettes

A Proposed Rule by the Food and Drug Administration on 05/04/2022

SUMMARY:

The Food and Drug Administration (FDA, the Agency, or we) is proposing a tobacco product standard that would prohibit menthol as a characterizing flavor in cigarettes. Tobacco use is the leading preventable cause of death and disease in the United States. Menthol's flavor and sensory effects increase appeal and make menthol cigarettes easier to use, particularly among youth and young adults. There are over 18.5 million menthol cigarette smokers ages 12 and older in the United States. This proposed product standard would reduce the appeal of cigarettes, particularly to youth and young adults, and thereby decrease the likelihood that nonusers who would otherwise experiment with menthol cigarettes would progress to regular smoking. In addition, the proposed tobacco product standard would improve the health and reduce the mortality risk of current menthol cigarette smokers by decreasing cigarette consumption and increasing the likelihood of cessation. FDA is taking this action to reduce the tobacco-related death and disease associated with menthol cigarette use. The proposed standard also is expected to reduce tobacco-related health disparities and advance health equity.

What was the quit rate after the menthol ban?

Natural Experiment:

- Those who smoke menthols were affected by the ban
- Those smoking non-menthol smokers were not: “control/comparison” group.

Menthol Smokers	Non-Menthol Smokers	Difference (95% CI)	95% CI	p
22.3%	15.0%	7.3%	2.1 – 12.5%	0.006

The 22.3% quit rate among those who smoke menthols is NOT a measure of the impact of the menthol ban. But the DIFFERENCE in quit rates between the two groups IS an estimate of the impact of the menthol ban.

Conclusion:

Those who smoked menthols prior to the menthol ban were significantly more likely to quit

What would happen after a menthol ban in the U.S., where menthol share is 35% (and 80-85% among blacks)?

Step 1: Obtain the number of adults who smoke menthols in the U.S. from the 2019 National Survey on Drug Use and Health (NSDUH)

	Number of menthol smokers in the United States (2019)
All adult smokers	18,328,597
Black adult smokers	5,222,907

Projections of additional quitting if/when the US bans menthol cigarettes: all US smokers and Black smokers

Step 2: Multiply by the effect of the menthol ban on increasing quitting

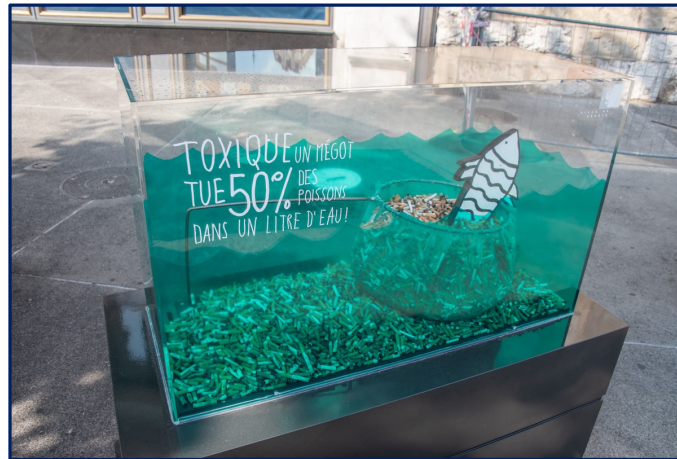
	Percentage of Canada's menthol smokers who quit vs. non-menthol smokers		Number of menthol smokers in the United States (2019)		Projected Number of US smokers who would quit	95% Confidence Interval
All adult smokers	7.3%	X	18,328,597	=	1,337,988	384,901 – 2,291,075
Black adult smokers	7.3%	X	5,222,907	=	381,272	109,681 – 652,863

Projections from the Canadian menthol ban:
If/when the U.S. bans menthol cigarettes, this would lead an
additional 1,337,988 smokers would quit,
of whom 381,272 would be Black smokers.

The single most impactful tobacco control policy in US history?



Environmental Benefits of a Menthol Ban



Other ITC Findings: Environmental impact

Thought question:

How many **FEWER** cigarettes would be **LITTERED** per year in the United States after the menthol cigarette ban was implemented?

1,337,988 additional quitters x 11.9 cigs/day x 365 days/year =
5,811,550,878 cigarettes per year that would no longer be smoked

Schultz et al. (2013)—estimate that 65% of cigarettes are littered

Total reduction in littered cigarettes per year due to a US menthol ban =

3,777,508,071

Summary: dissemination and transfer of evidence to increase chances of **utilization**



1. Research evidence is very helpful at every stage of the policy process

- Documenting the need for policies
- Demonstrating that the proposed policy is effective
- Anticipating counterarguments and providing evidence dispelling them
- Show support for policies (especially among those who will be affected)

2. Use methods for presenting the evidence in vivid ways

- Odds ratios, regression coefficients and significance tests: important for research, but TERRIBLE for dissemination to policymakers and the public
- Translate **effect sizes (e.g., percentage differences)** into **PEOPLE**.

3. Get to know researchers — locally, nationally, globally

- Developing collaborations and partnerships with researchers opens up opportunities for access to valuable evidence that you can use.
- NOT just research-informed policy; can also be policy-informed research

Major Support for the ITC Project



US National Cancer Institute
P01 CA200512



Canadian Institutes of Health Research
FDN-148477



Ontario Institute for Cancer Research
Senior Investigator Award (2007-2027)

ITC Project Research Organizations



ITC Project Research Support



“Information is Power: Making it Real”



Soon-Young Yoon
UN representative
International Alliance of Women

Information is
power: but how
can we make it
real?





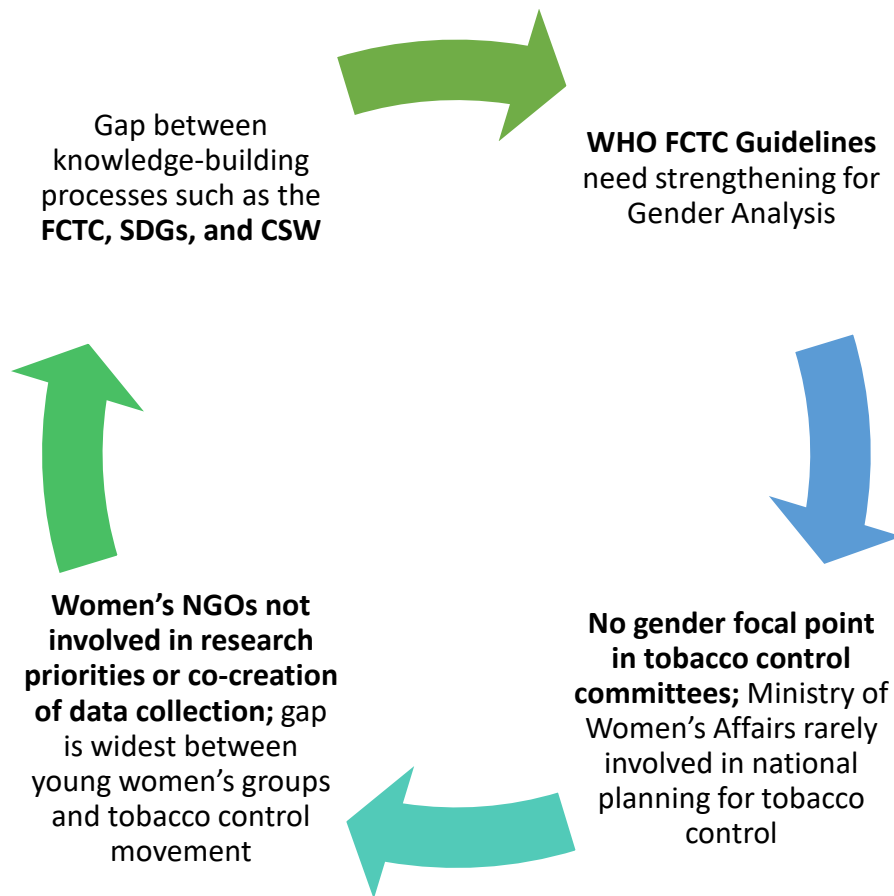
Information and Data including digital systems are not neutral but are contextualized in value systems

Aarathi Krishnan in her discussion of digital justice and youth leadership in the Feminist Framework for Our Common Agenda says that current digital systems are not neutral, and that digital governance is contextual in historically dominant value systems. These include sexism, racism, and post-colonial power relations


Invisibility = a form of discrimination and reflects power relations in the control over knowledge

*(Preface, Feminist Framework for Our Common Agenda, GWL Voices for Change, online book, 2023
<https://gwlvoices.com/download/feminist-framework-for-our-common-agenda/>)*

The challenge for Gender and Tobacco research



The tobacco
industry
uses
women's
liberation
language to
build
messaging
credibility



- "Our top priority is achieving gender balance at all levels of the company"
- "An inclusive culture for all"
- "Leveraging the talents of women"

*(Phillip Morris, July 2023 -
<https://www.pmi.com/inclusion-diversity/leveraging-the-talents-of-women>)*

The 2023 Global Sustainable Development Report provides a framework

- Three stages across an S-curve to progress from data and knowledge building to sustainable transformative change



3 stages of an S-curve: **EMERGENCE**



Destabilization of the old order

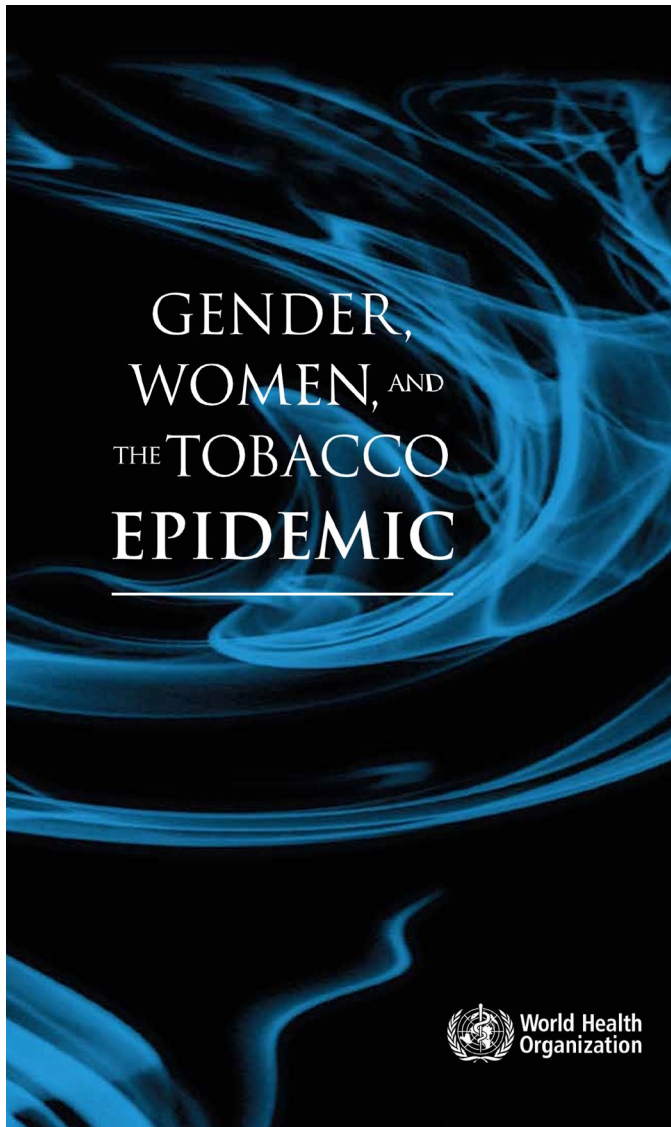


Data and the scientific method reduces uncertainty, identifies tipping points, accelerates the uptake of innovations and lays the foundation for the next frontier of ideas.



Deliberate process to collectively build common narratives around new ideas.

Gathering the evidence: Gender, Women and the Tobacco Epidemic



- 1998 WHO conference “Making a Difference to Tobacco and Health: Avoiding the Tobacco Epidemic in Women and Youth, held in Kobe, Japan. 11 commissioned papers, 500 participants includes scientific working group, feminist leaders, 5 CEDAW experts, policy-makers and ministers of health.
- 2001 first WHO monograph on “Gender, Women and the Tobacco Epidemic.” Highlights women’s human rights framework related to the international women’s movement, the role of men, and women’s right to a smoke-free environment at home and at the work place, violence against women as a tactic to inhibit women’s leadership
- 2010 WHO report on women and health highlights tobacco use as one of the most serious avoidable risk factors for premature death and disease in adult women, predicting 2.5 million deaths by 2030 for adult women, 75% in developing countries.


WHO FCTC = common narrative

- Signatories to the WHO FCTC: 168
Parties to the WHO FCTC: 182 (Last Party: Andorra. Entry into force: 11 May 2020)
- Preamble
 - *Recalling* that the Convention on the Elimination of All Forms of Discrimination against Women, adopted by the United Nations General Assembly on 18 December 1979, provides that States Parties to that Convention shall take appropriate measures to eliminate discrimination against women in the field of health care,
 - *Recalling further* that the Convention on the Rights of the Child, adopted by the United Nations General Assembly on 20 November 1989, provides that States Parties to that Convention recognize the right of the child to the enjoyment of the highest attainable standard of health.



2nd stage of an
S-curve:
ACCELERATION



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Break down and tipping point

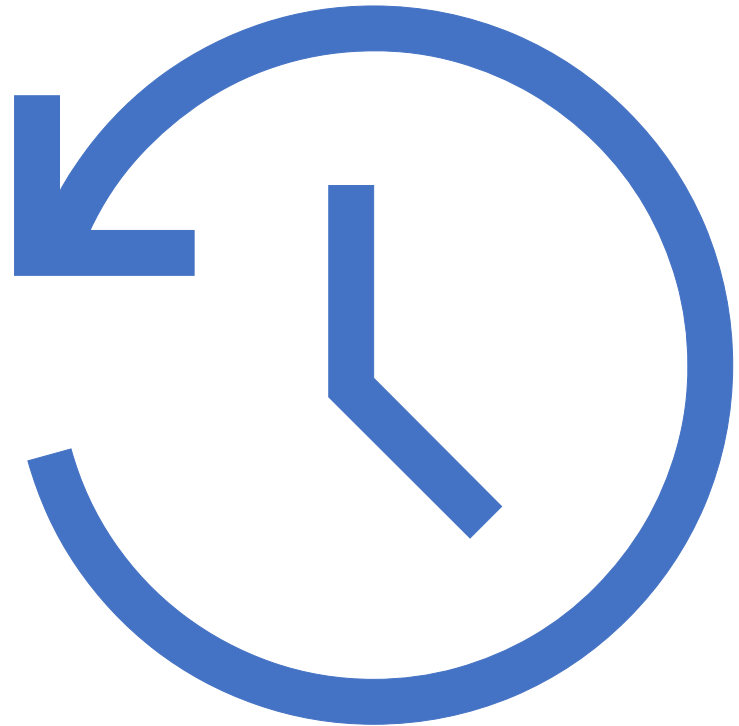
Conflicts, tensions and political struggles are common as different actors and interests seek to promote or delay the transition.

Innovations (organizational, technological, behavioural and social) are widely shared, leading to rapid, non-linear growth, there is a new normal in daily life.

What moves it to the next stage?

Governments must send a clear
market signal for investments
and adoption of innovation with
implementation of new
knowledge

Capacity-building is critical



3rd stage of an
S-curve:
STABILISATION





Phase out

Innovations are anchored in regulations, user habits and standards. Unless reforms are institutionalized, and if leaders cannot sustain momentum or leave offices the whole process may break down. S-curves work in both directions: progress and decline.

Governments must shape markets, stimulate research and innovation, set targets, standardize and regulate businesses.



Examples of missed opportunities

- 2023 WHO study showed that the public's awareness of tobacco use as a risk factor for NCDs was low. No data on women's perceptions and knowledge which we know differs. (e.g. belief that heart disease and tobacco use is a man's issue)
- WHO FCTC 2023 Guidelines for reporting misses opportunities to integrate the CEDAW, CRC and ICESR mandate in the Preamble in its reporting. It needs to add gender dimension to decision-making roles on National Tobacco Control Committees, changes in gender stereotypes, and gender budgeting (a few exceptions: B-22 on SHS identified gender as a factor)

How can we act to speed-up and scale-up progress?

- Need more research on successful case studies to counter the tobacco industry's targeting youth and girls
- Better local documentation of how the tobacco industry is using feminist language to get support of rural women and tobacco growers
- Need more data and research using intersectional lens (segmentation by gender identity, race, age, ethnicity, socio-economic and religious status, climate and environmental vulnerability)



Opportunities for a Game Changer

- Goal 3 of the SDGs identifies ratification and implementation of the WHO FCTC as a target. Combined with Goal 5 on Gender Equality the SDGs can be a locus of building a common narrative; applying CEDAW to both as a women's human rights and tobacco control accountability mechanism.
- CEDAW, CRC and ICECSR – NGO reports such as those submitted by ASH for Sweden and the IAW for other reporting countries brings data into the legal arena. The CEDAW committee's concluding remarks to governments often includes the need to gather better data. CEDAW General Recommendation 9, states that lack of data is a violation under CEDAW, particularly if marginalized women and girls are not counted such as refugees, indigenous women, and rural women.
- Consolidation of data systems across the Sustainable Development Goals related to health targets. Example of GEDA (Gender, Environment and Data Alliance includes WEDO and UNFPA) to share data on women's health with environment data and use it to promote women's rights in multiple political spaces.

Future narratives

Does this SDG framework help us position our research and data efforts in the larger picture?

If so, how and where?

Is our pathway through the 3 stages different by country, city and community?

How can we find more strategic ways to reach stage 3 of stabilization at different levels?

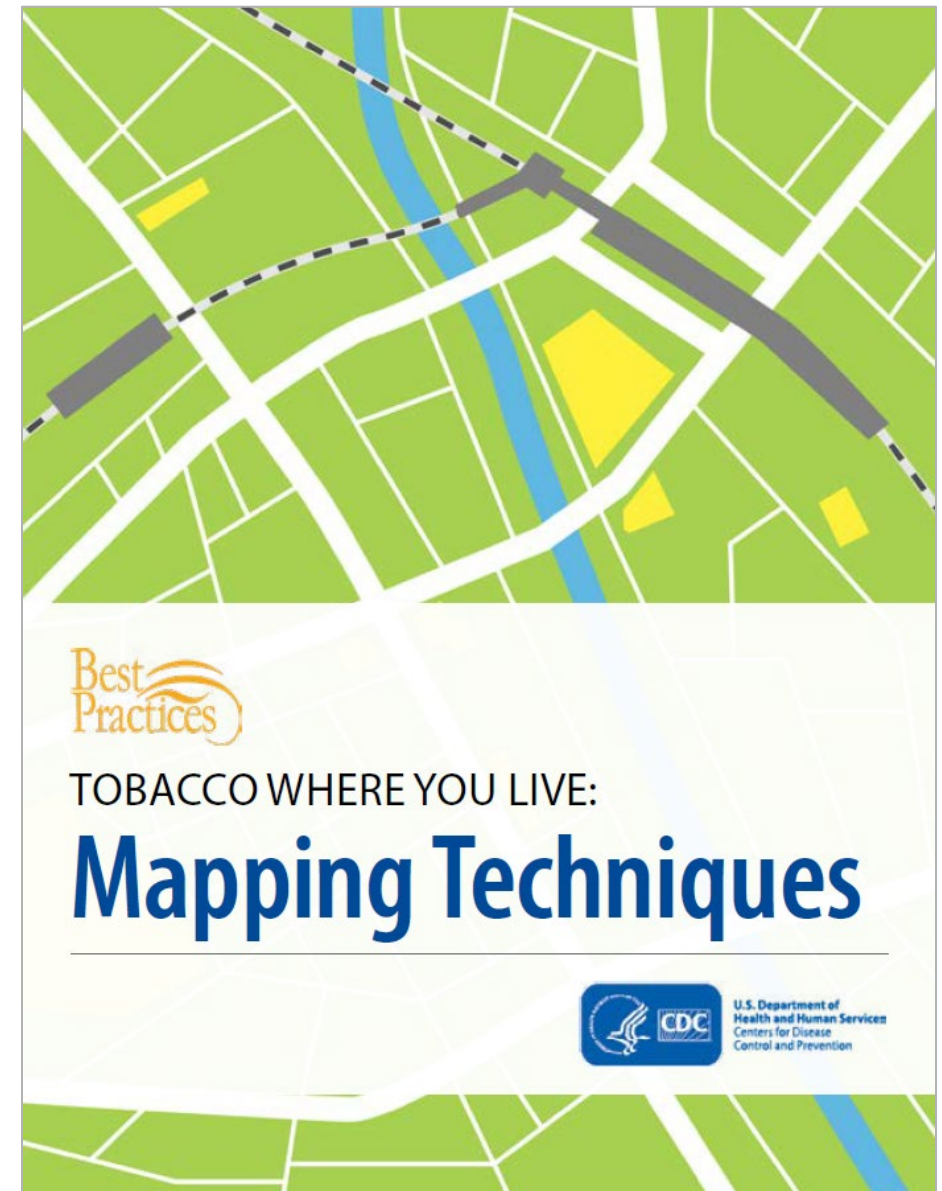


Center for Public Health
Systems Science

Brown School

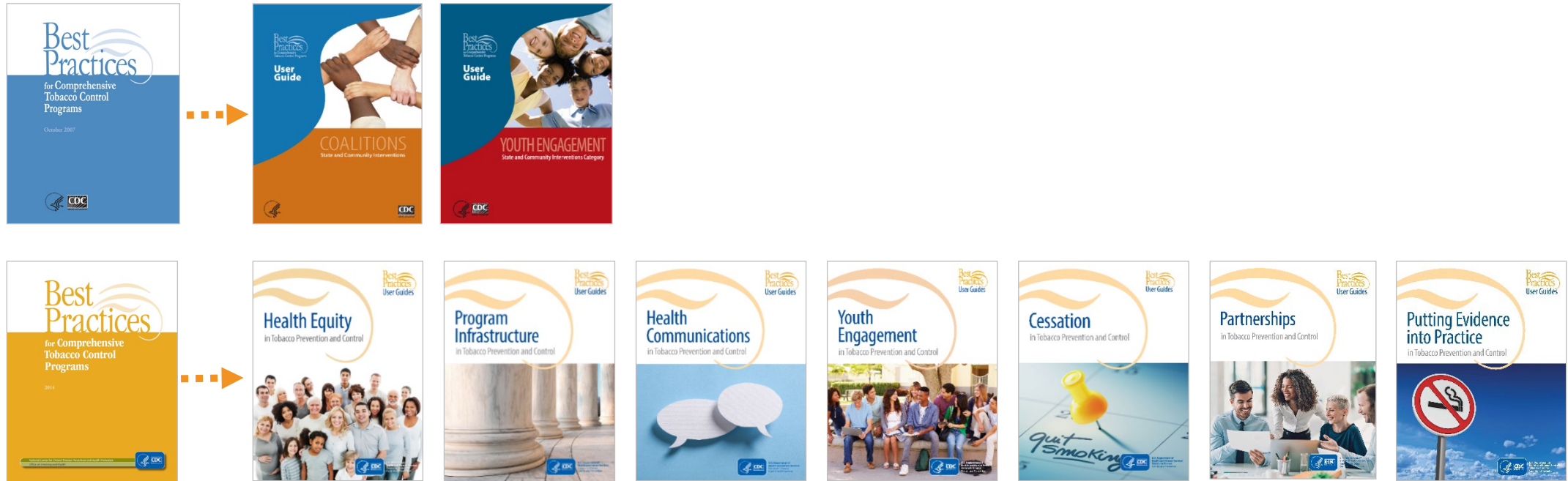
Tobacco Where You Live: *Mapping Techniques*

Zara Petković



Washington University in St. Louis

The *Best Practices User Guides*



Why *Tobacco Where You Live?*



Gaps in smokefree law adoption



Limited adoption of innovative retail strategies



Disparities in access to cessation treatment



Limited sources of local data



Wide variation in commercial tobacco tax rates



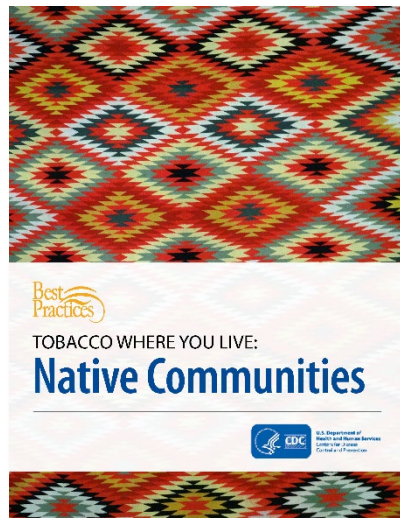
Why Tobacco Where You Live?

Understanding **community needs** and using **community-driven solutions** can inform how to move toward closing gaps in commercial tobacco prevention and control.

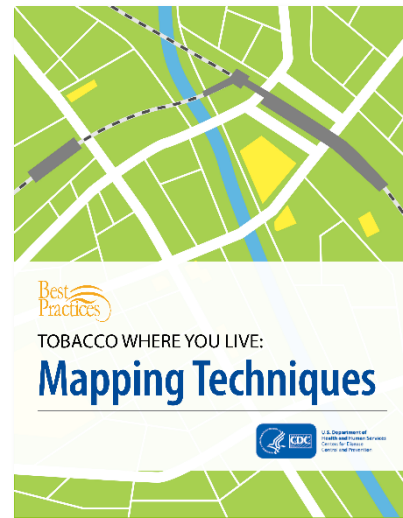


Tobacco Where You Live Supplements

Topics important to reduce commercial tobacco use in communities with the highest prevalence



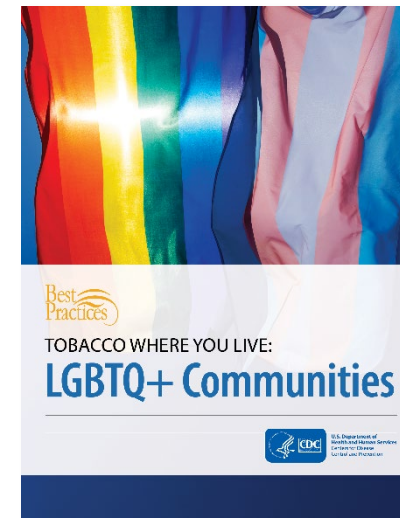
PUBLISHED
June 2022



PUBLISHED
October 2022



PUBLISHED
November 2022



COMING SOON



COMING SOON



Tobacco Where You Live supplements

- Fresh new look and feel
- Designed for the web
- Shorter length
- New sections, like **Learn the Basics** and **Get Ready**

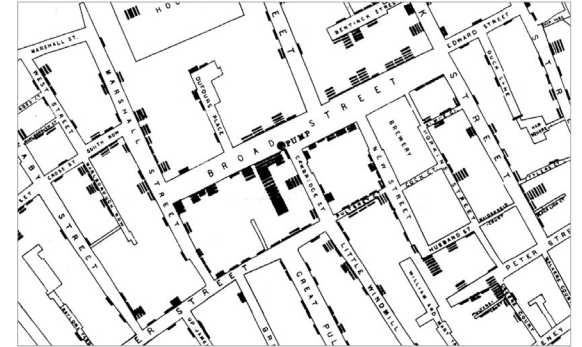


LEARN THE BASICS

Maps in Public Health

John Snow created the [first known public health map](#) to show London's 1854 cholera epidemic.¹⁰ By mapping sick households, Snow identified a specific water pump as the source of the illness.

Snow's innovation showed that maps can help track infectious diseases, a practice public health programs still use. Maps are now also commonly used to plan and implement chronic disease programs, including commercial tobacco control strategies.



John Snow's map of the 1854 cholera epidemic. Source: Wikipedia

Maps were created by hand until the introduction of the first Geographic Information Systems (GIS) in the late 1960s. This new technology required cabinet-sized mainframe computers, which were not available to the public.¹¹

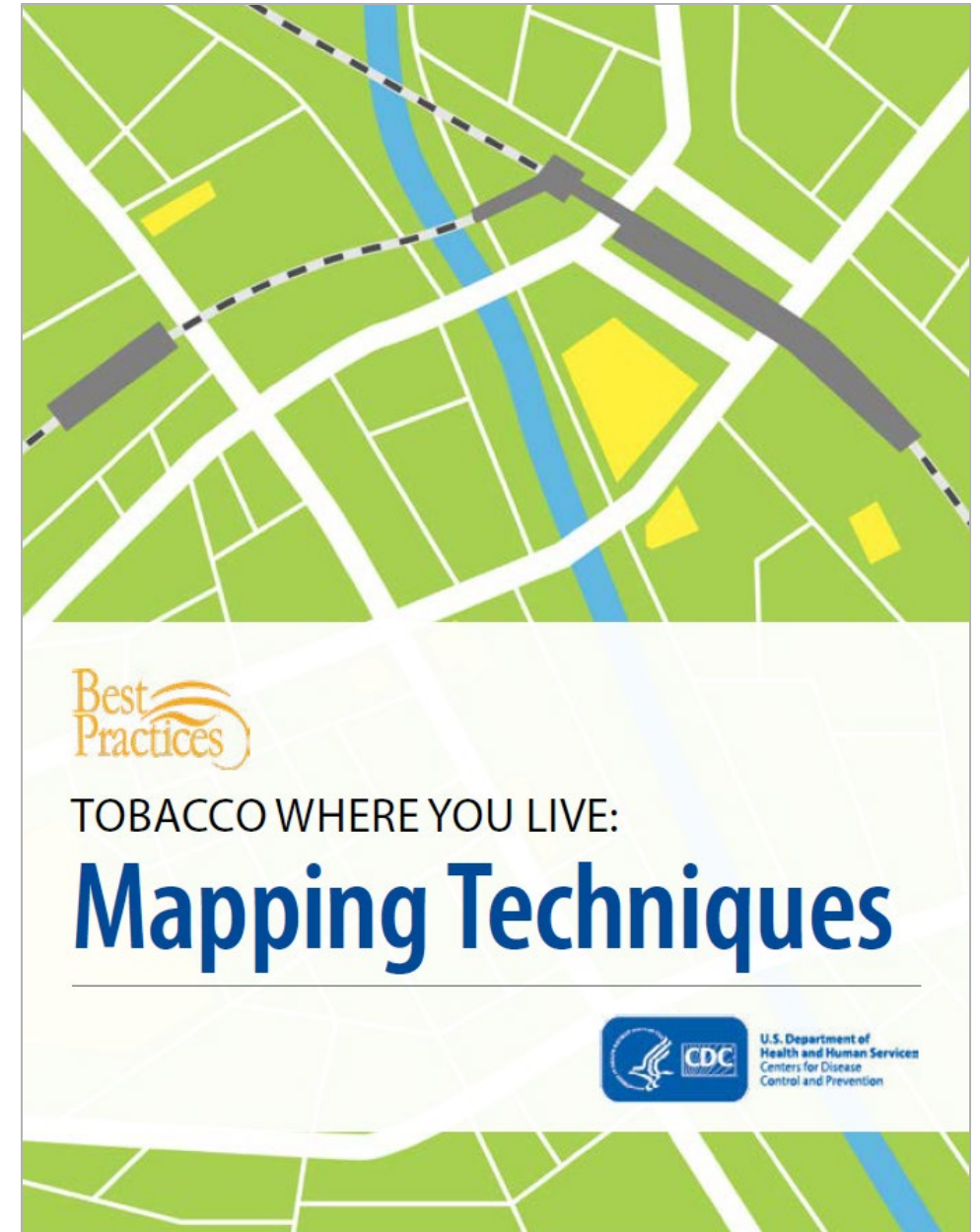
Now, software and tools exist to make creating maps easier.^{12,13} [Online trainings](#) and [university courses](#) are widely available to train public health professionals on using maps, and many states and cities have dedicated Geographic Information Systems (GIS) departments.^{14,15}

Through the widespread popularity of the Internet, maps have evolved from static images to interactive tools. In 1999, the National Cancer Institute published an online version of its [Cancer Atlas](#), one of the first interactive public health maps.^{16,17} Online mapping tools have also added new features such as companion data reports for a community or comparing two communities to each other.¹⁸



Tobacco Where You Live: *Mapping Techniques*

- Understand the applications of mapping for tobacco control work
- Build infrastructure for mapping within your organization
- Utilize best practices to find mapping data and design maps
- Test, utilize, and disseminate maps



Make the Case

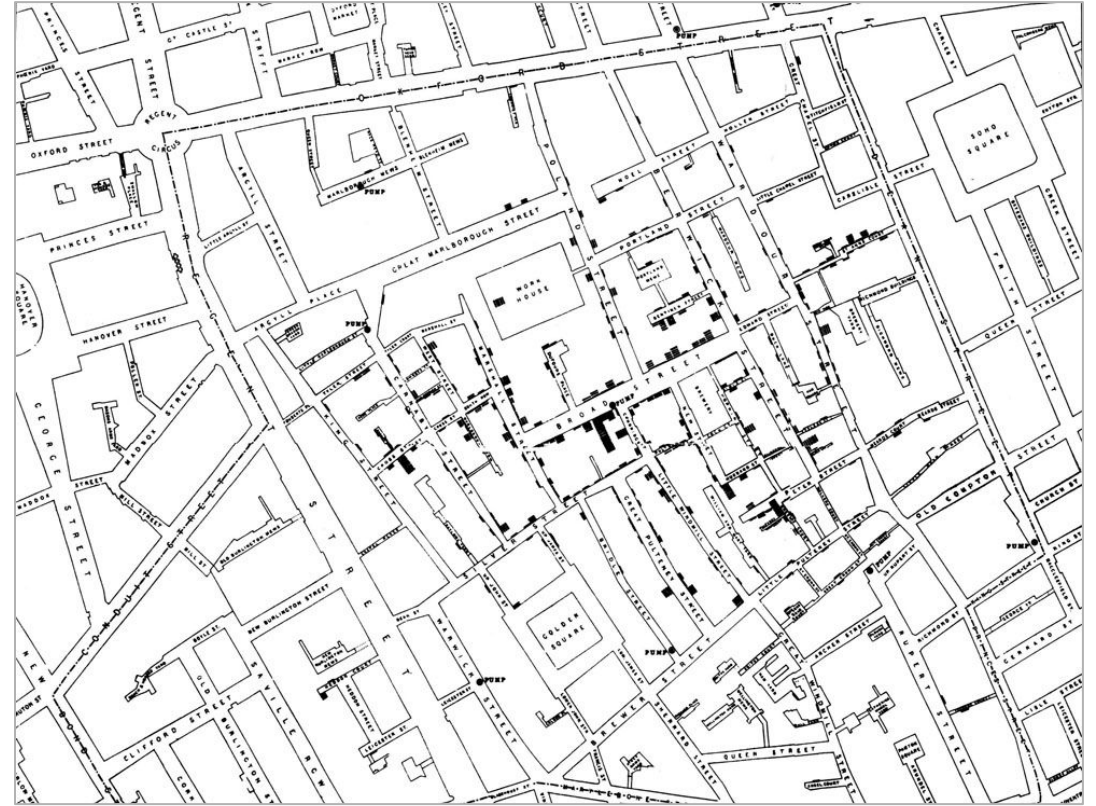
Maps can help you:

- Understand commercial tobacco use in your community
- Identify tobacco-related disparities
- Increase public understanding
- Visualize possible approaches
- Show effectiveness



Learn the Basics

- History of mapping in public health
- What kinds of information can maps convey?
- Geographic Information Systems (GIS)
- How can mapping support existing tobacco control strategies?

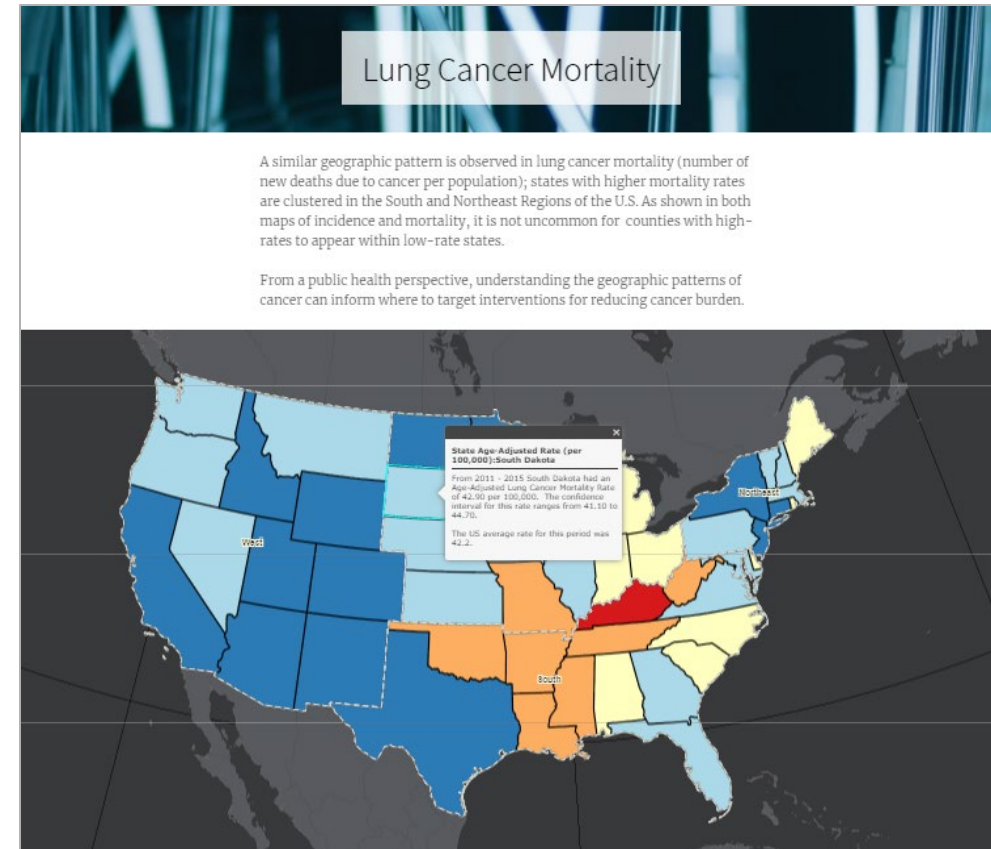


John Snow's map of the 1854 cholera epidemic. Source: University of California, Los Angeles



Get Ready

- Work with partners to help identify mapping goals
- Review existing maps that you can use or adapt
- Assess technical infrastructure
- Build leadership support
- Train staff



Lung cancer mortality Story Map® Source: National Cancer Institute



FREE ONLINE COMMERCIAL TOBACCO CONTROL MAPS

Map (Publisher)	Information	Geographic Level	Features
Interactive State Tobacco Policy Map (Tobacco Control Network)	Taxes, smokefree and retail laws, and preemption	State	<ul style="list-style-type: none"> • Hover feature for quick overview of commercial tobacco control laws • Check boxes to show which states have enacted specific laws
PLACES (CDC)	Adult smoking prevalence	County, place, census tract, zip code	<ul style="list-style-type: none"> • Interactive comparison of places to highlight prevention measures and health outcomes • Downloadable datasets
Smokefree Lists and Maps (American Nonsmokers' Rights Foundation)	Clean air laws, flavored tobacco restrictions, and e-cigarette and marijuana regulations	State, local	<ul style="list-style-type: none"> • Static maps with corresponding lists and charts on smokefree regulations • Downloadable database of college commercial tobacco-free policies
State Tobacco Activities Tracking and Evaluation (STATE) System (CDC)	Smoking prevalence, commercial tobacco control funding, quitline use	State	<ul style="list-style-type: none"> • Accompanying tables of corresponding data • Interactive legend to sort states by data category • Built-in tool to save images for your own presentations
Tobacco Policy Viewer (National Cancer Institute)	Smokefree laws for workplaces, restaurants, and bars	State, county, city	<ul style="list-style-type: none"> • Animation tool to show changes in laws over time • Panning and zooming to focus on specific areas of the U.S. with option to view multiple layers of data • Downloadable state- and county-level data
Tobacco Swamps Dashboard (ASPiRE)	Disparities in concentrations of tobacco retailers	30 large U.S. cities	<ul style="list-style-type: none"> • Heat map color coded to show distances to tobacco retailers • Geographic Information System (GIS) modeling the likely effect of tobacco retail policies in different cities



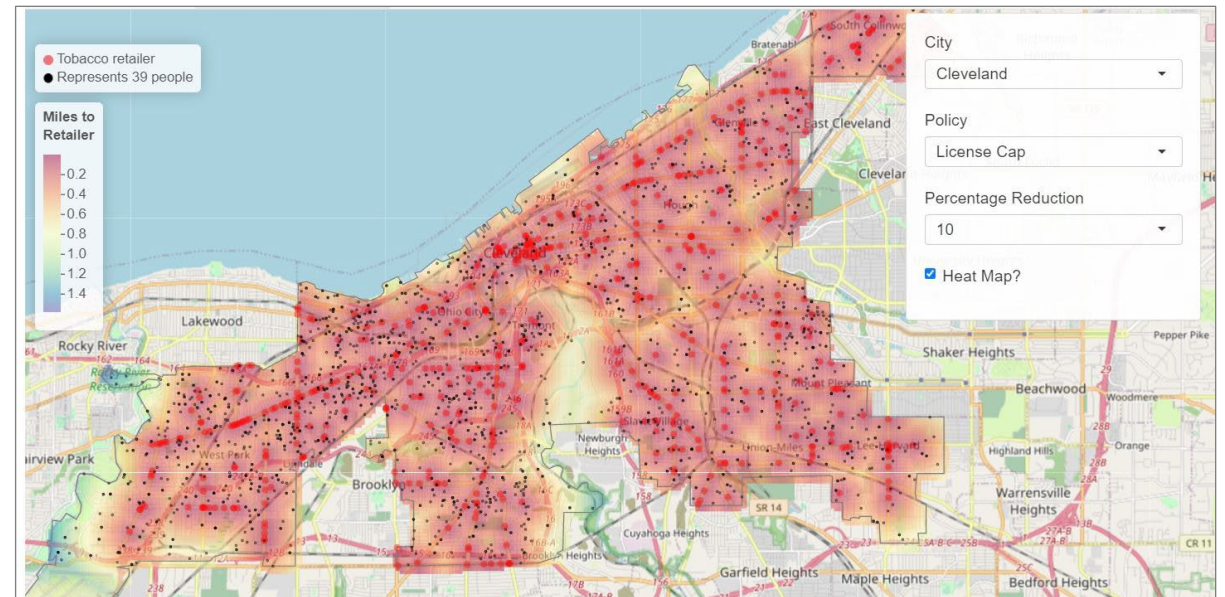
Take Action

1. Decide what to map
2. Find data
3. Choose software
4. Design your map
5. Test your map
6. Use your map



Step 1: Decide What to Map

- Choose a map purpose
- Define your audience
- Select the area and scale



Tobacco Swamps interactive dashboard. Source: ASPIRE Center's Tobacco Town project, funded by the National Cancer Institute.



Step 2: Find Data

Where to Find Mapping Data



Cessation

- [CDC's STATE System](#)
- [NIH's Tobacco Use Supplement to the Current Population Survey](#)



Demographics and Determinants of Health

- [US Census Bureau](#)
- Local health departments
- [CDC/ATSDR's Social Vulnerability Index](#)



Funding

- [ALA's State Legislated Actions on Tobacco Issues \(SLATI\)](#)



Policies and Enforcement

- [FDA Compliance Check Data](#)
- [Temple's LawAtlas](#)



Prevalence

- [CDC's Behavioral Risk Factors Data Portal](#)
- [America's Health Rankings](#)
- [NCI's Tobacco Use Supplement to the Current Population Survey](#)
- [CDC's STATE System](#)
- [CDC's National Youth Tobacco Survey](#)



Smokefree Policies

- [NCI's Tobacco Policy Viewer](#)
- [CDC's STATE System](#)
- [ANR Foundation's Smokefree Lists and Maps](#)
- [ALA's State Legislated Actions on Tobacco Issues \(SLATI\)](#)



Tobacco Retailers

- [CDC's STATE System](#)
- [Reference USA](#)
- Local retailer lists



Step 3: Choose Software

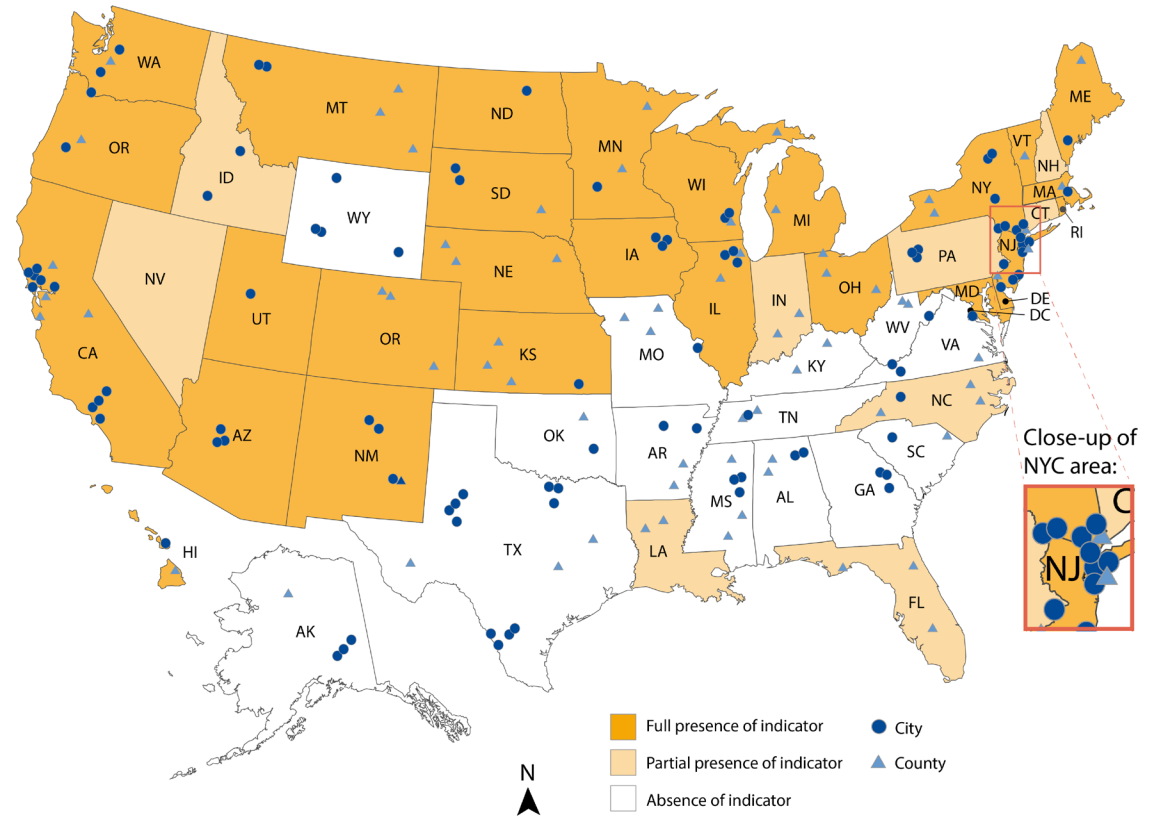
MAPPING SOFTWARE

Name (Creator)	Cost	Skill Level	Good For	Features
Epi Map (CDC)	Free	Beginner	<ul style="list-style-type: none"> • Creating interactive maps to create multiple views of the same data • Identifying clusters of data 	<ul style="list-style-type: none"> • Upload data or choose from select data available • Turn a street address into geographic coordinates • Part of CDC's EpiInfo software tools with user guide⁶⁴
Google Earth (Google)	Free	Beginner	<ul style="list-style-type: none"> • Marking locations with symbols 	<ul style="list-style-type: none"> • Upload layers of data • Embed map to a website or share with a unique link
Tableau Public (Tableau)	Free	Beginner	<ul style="list-style-type: none"> • Creating interactive maps • Showing relationships between data • Sharing online 	<ul style="list-style-type: none"> • Create interactive data dashboards • Make graphics to accompany maps • Watch training videos⁶⁵
GIS Cloud (GIS Cloud)	Varies	Beginner	<ul style="list-style-type: none"> • Creating maps with a team 	<ul style="list-style-type: none"> • Collect data through mobile devices • Publish maps compatible with other GIS software • Online certification program available
QGIS (The QGIS Project)	Free	Beginner to Intermediate	<ul style="list-style-type: none"> • Analyzing data • Visualizing relationships • Making basic and advanced maps 	<ul style="list-style-type: none"> • Compatible with advanced GRASS GIS extensions⁶⁶ • Learn from a training manual⁶⁷



Step 4: Design Your Map

- Select a map type
- Choose the correct map projection
- Add elements to aid understanding
- Follow best practices for data visualization



*Example map outlining data visualization best practices.
Source: CPHSS*



Step 5: Test Your Map

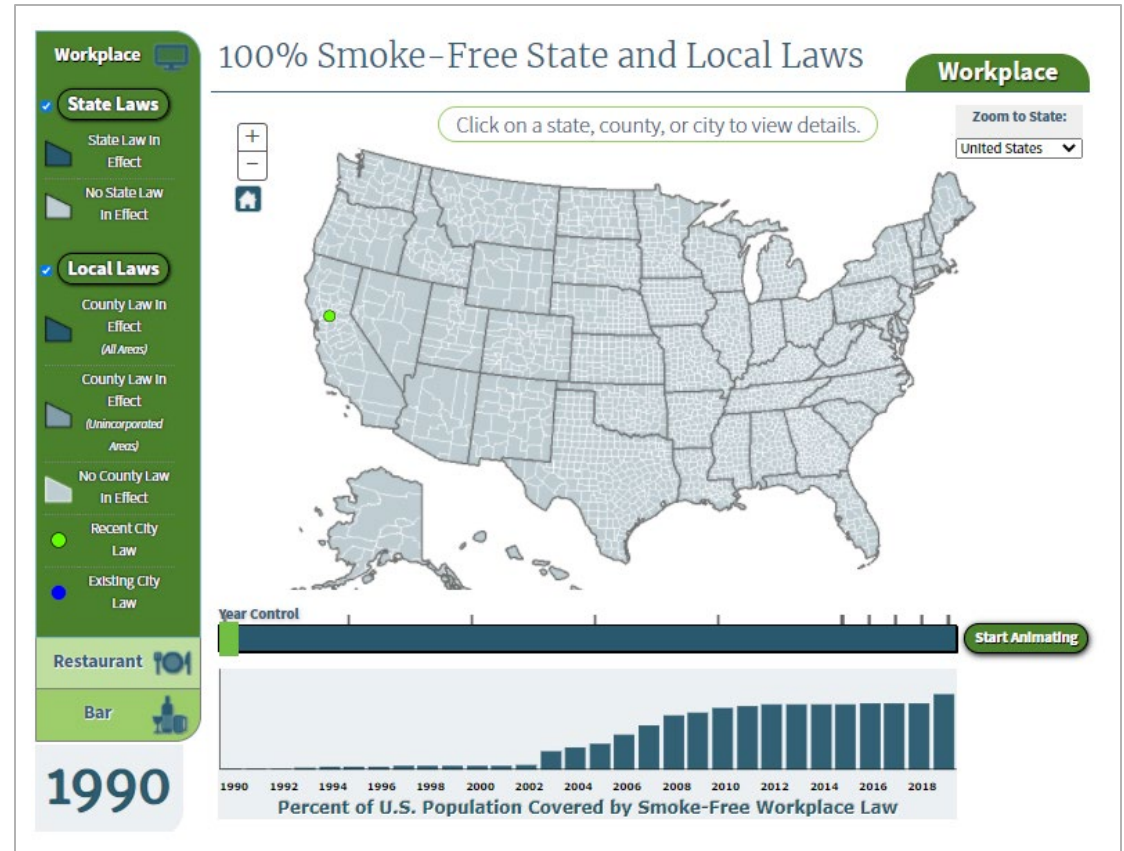
- Do audiences understand the map?
- Can audiences apply the map to their work?
- Are interactive elements helpful?



Step 6: Use Your Map

Include your map in:

- Funding applications
- Reports for decision making and allocating resources
- Community assessments
- Educational materials for the community or decision makers



Interactive map of smokefree state and local laws.

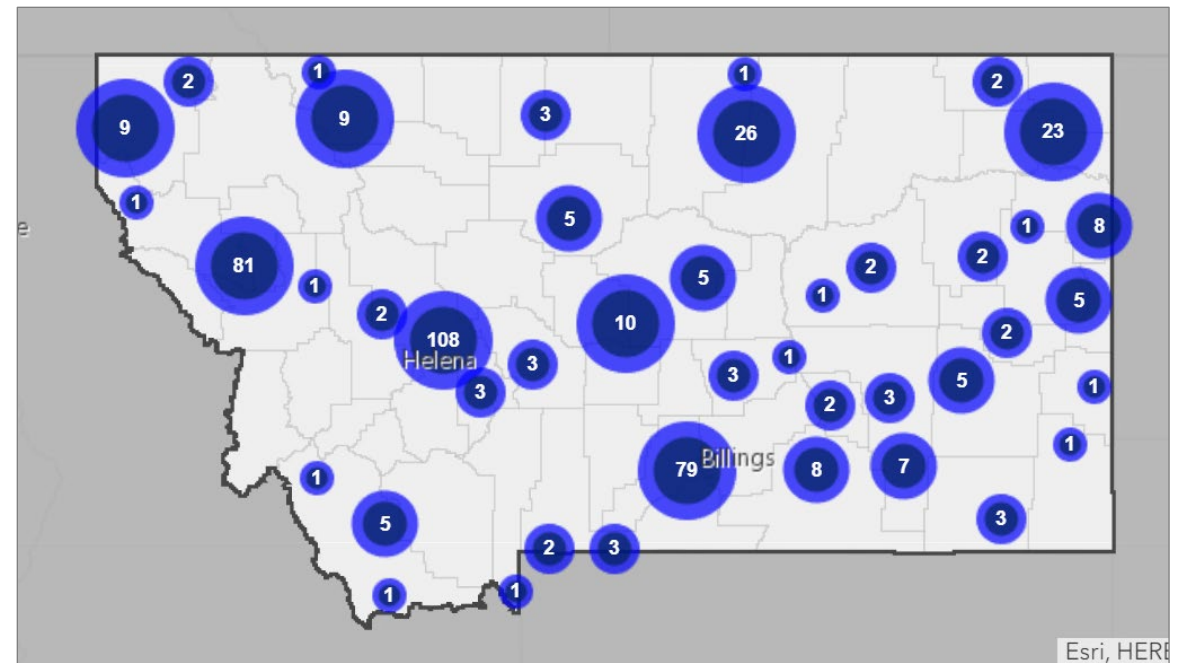
Source: National Cancer Institute's Tobacco Policy Viewer



Community example

Montana leverages mapping techniques to protect kids

The Montana Tobacco Use Prevention Program *Tobacco Retail Mapper* uses accurate, local data to show the locations of tobacco retailers near schools, and to track retailer compliance with minimum sales age laws.



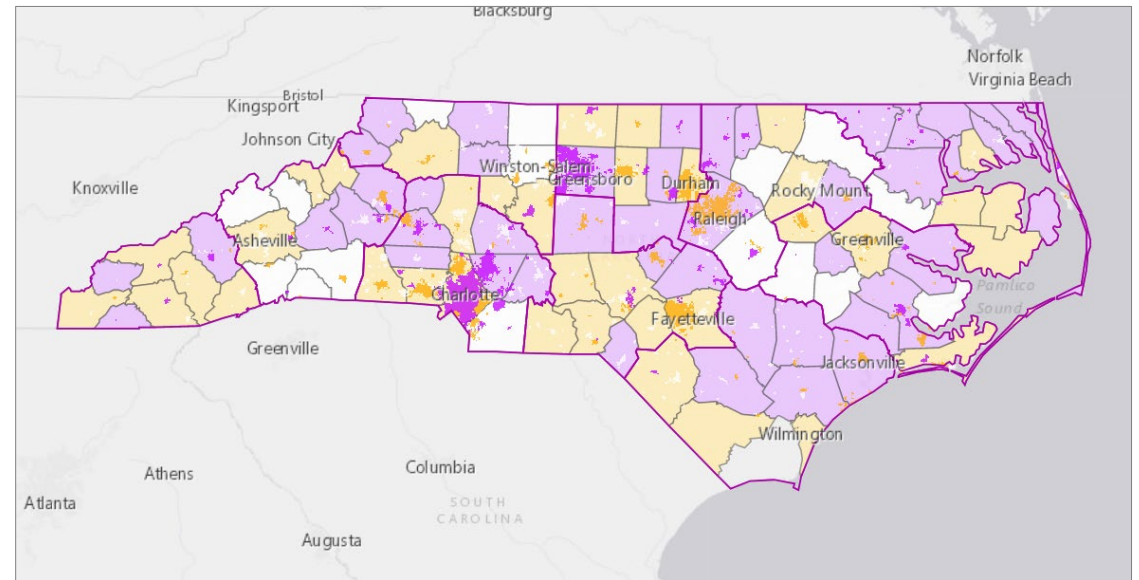
Screenshot from Montana Tobacco Retail Mapper showing retailers near schools



Community example

North Carolina uses maps to track smokefree policies

The North Carolina Tobacco Prevention and Control Branch collaborated with other state organizations to create and disseminate maps tracking local smokefree policies implemented across the state.



Screenshot from North Carolina's interactive map of smokefree and tobacco-free local government policies



Where to Find the *Mapping Techniques* Supplement



The screenshot shows the CDC website's 'Smoking & Tobacco Use' section. The page has a dark blue header with the title 'Smoking & Tobacco Use' and a link for 'Advanced Search'. Below the header, a breadcrumb trail reads 'Home > State and Community Work'. A left sidebar contains a navigation menu with categories like 'Home', 'Office on Smoking and Health (OSH)', 'Quit Smoking', 'Basic Information', 'Commercial Tobacco and Health Equity', 'Surgeon General's Reports on Smoking and Tobacco Use', 'Data and Statistics', 'Patient Care', 'State and Community Work' (which is expanded), 'Tobacco Control Programs', 'Evidence Based Guides for States' (highlighted), 'State Fact Sheets', 'Tobacco Ingredient and Nicotine Reporting', 'Tobacco Counter-Marketing Campaign', and 'Global Tobacco Control'. The main content area is titled 'Evidence Based Guides for States' and includes a paragraph describing the 'Best Practices for Comprehensive Tobacco Control Programs—2014' guide. Below this is a 'Download Guide by Section' button and a list of sections: 'Letter From the Director, Executive Summary, and Introduction', 'Section A. Components of Comprehensive Tobacco Control Programs', 'Section B. Recommended Funding Level for All 50 States and the District of Columbia', 'Section C. Recommended Funding Levels, by State', 'Appendices', and 'Fact Sheets'. On the right side of the main content area, there is a thumbnail image of the 'Best Practices' guide cover and a button that says 'Complete Guide Download PDF ~ 2 MB'.

<https://www.cdc.gov/tobacco/stateandcommunity/guides>



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Stay Involved



Registration is open for ASH's Project Sunset online course this Fall.
Visit:

<https://tinyurl.com/yck8tf8h>

to learn more and register.

NEXT WEBINAR:

Thursday, September 14, 2023

Regulating Tobacco Products: An International,
Federal and State Level Perspective

[Registration is open here>](#)

The Committee on the Elimination of Racial Discrimination (CERD) Sign on Campaign

Don't miss out on this crucial campaign! There's still
time to get your organization involved. Visit
[**https://ash.org/sign-cerd-2023**](https://ash.org/sign-cerd-2023) to sign on now. All
signatures **MUST** be submitted no later than **Thursday,**
August 3rd at 5pm EST.