

# **Real-world Science, Real-world Impact: Experiences of the International Tobacco Control Policy Evaluation Project**

**Barbara Riley, PhD**

Centre for Behavioural Research and Program  
Evaluation, University of Waterloo, Ontario Canada

KT08 Forum, June 9<sup>th</sup> – 11<sup>th</sup>, 2008

Banff, AB



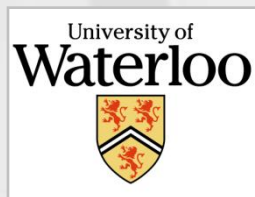
# Outline

- ◆ Context: tobacco problem; Framework Convention on Tobacco Control (FCTC)
- ◆ Overview of the International Tobacco Control Policy Evaluation Project (ITC)
- ◆ Examples of research impact and knowledge exchange activities
- ◆ Some issues for discussion



*Excerpts from a presentation by Dr. Geoffrey T. Fong  
(University of Waterloo) at the Stanford University  
Global Tobacco-Free Research Initiative Colloquium,  
April 10, 2008*

**The International Tobacco Control Policy  
Evaluation Project (the ITC Project):  
Evaluating the Impact of the Framework  
Convention on Tobacco Control**



# ITC Investigators

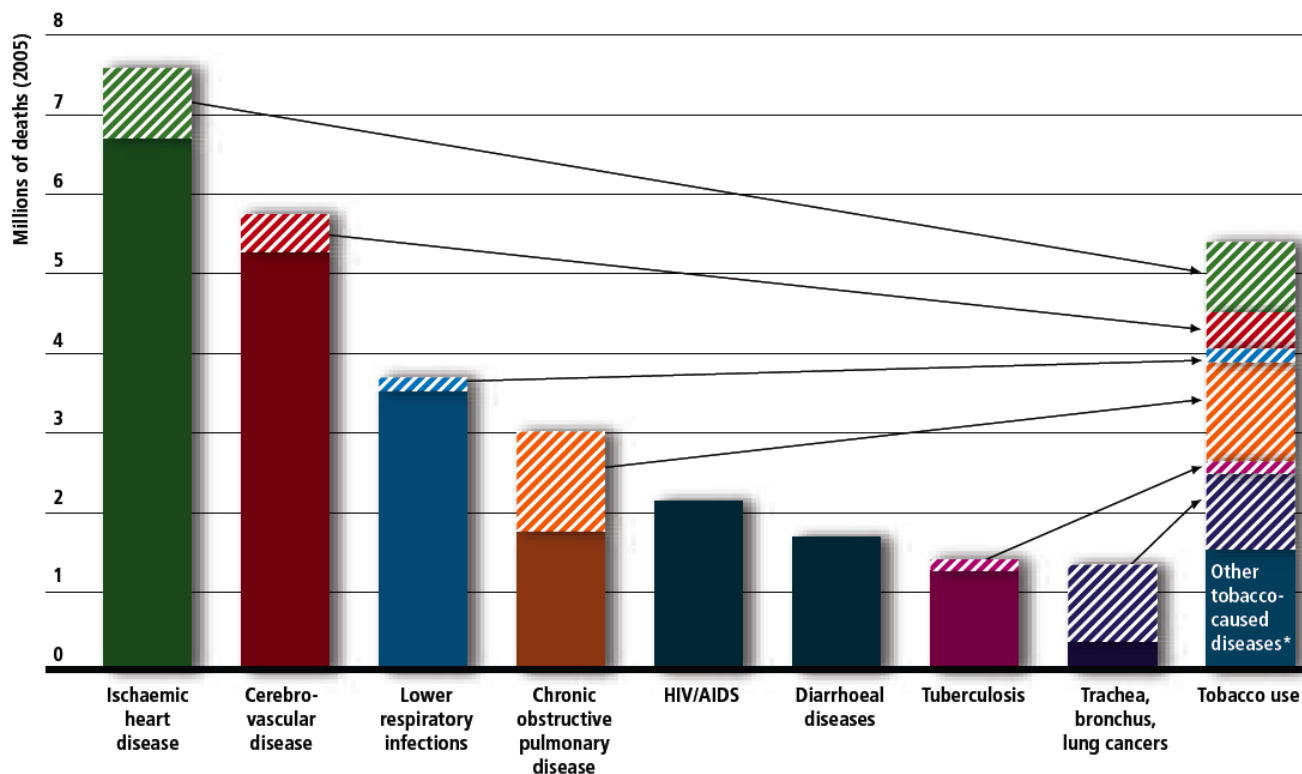
Principal Investigators: **Geoffrey T Fong** (University of Waterloo, Canada), **Ron Borland** (The Cancer Council Victoria, Australia), **Michael Cummings** (Roswell Park Cancer Institute, US), **Gerard Hastings** (University of Strathclyde, United Kingdom)

Co-Investigators: Ann McNeill, Susan Anderson (UK), Gary Giovino, Andrew Hyland, Frank Chaloupka, Hana Ross, Nancy Kaufman (US), Mary Thompson, Steve Brown, David Hammond, Sharon Campbell, Mark Zanna, Paul McDonald (Canada), Mohammad Siahpush, Melanie Wakefield (Australia)

*“Tobacco is the most effective agent of death ever developed and deployed on a worldwide scale.”*

– John Seffrin, President,  
American Cancer Society and UICC

## TOBACCO USE IS A RISK FACTOR FOR SIX OF THE EIGHT LEADING CAUSES OF DEATH IN THE WORLD



Hatched areas indicate proportions of deaths that are related to tobacco use and are coloured according to the column of the respective cause of death.

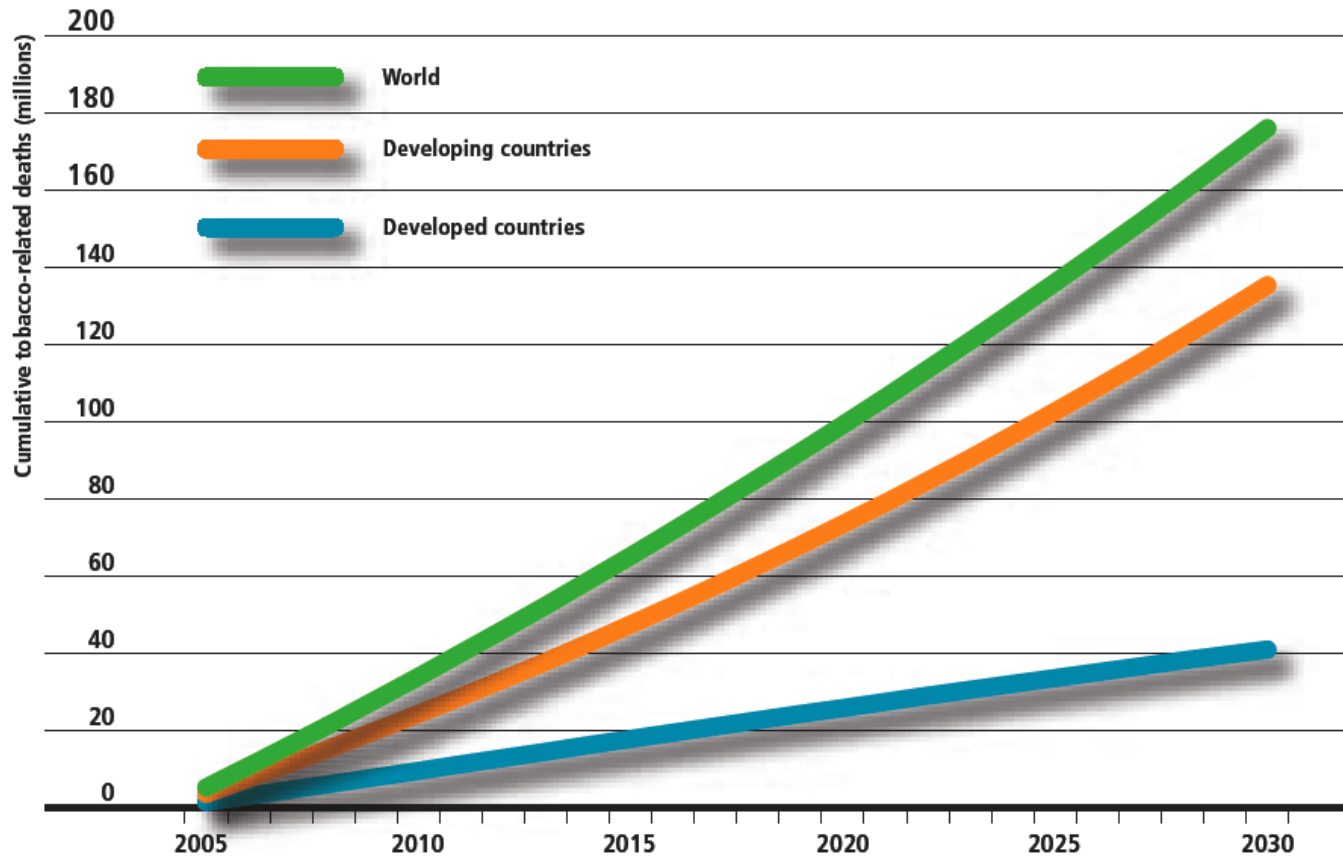
\*Includes mouth and oropharyngeal cancers, oesophageal cancer, stomach cancer, liver cancer, other cancers, as well as cardiovascular diseases other than ischaemic heart disease and cerebrovascular disease.

Source: Mathers CD, Loncar D. Projections of global mortality and burden of disease from 2002 to 2030. *PLoS Medicine*, 2006, 3(11): e442. Additional information obtained from personal communication with C.D. Mathers.

Source of revised HIV/AIDS figure: AIDS epidemic update. Geneva, Joint United Nations Programme on HIV/AIDS (UNAIDS) and World Health Organization (WHO), 2007.

# TOBACCO WILL KILL OVER 175 MILLION PEOPLE WORLDWIDE BETWEEN NOW AND THE YEAR 2030

## Cumulative tobacco-related deaths, 2005–2030



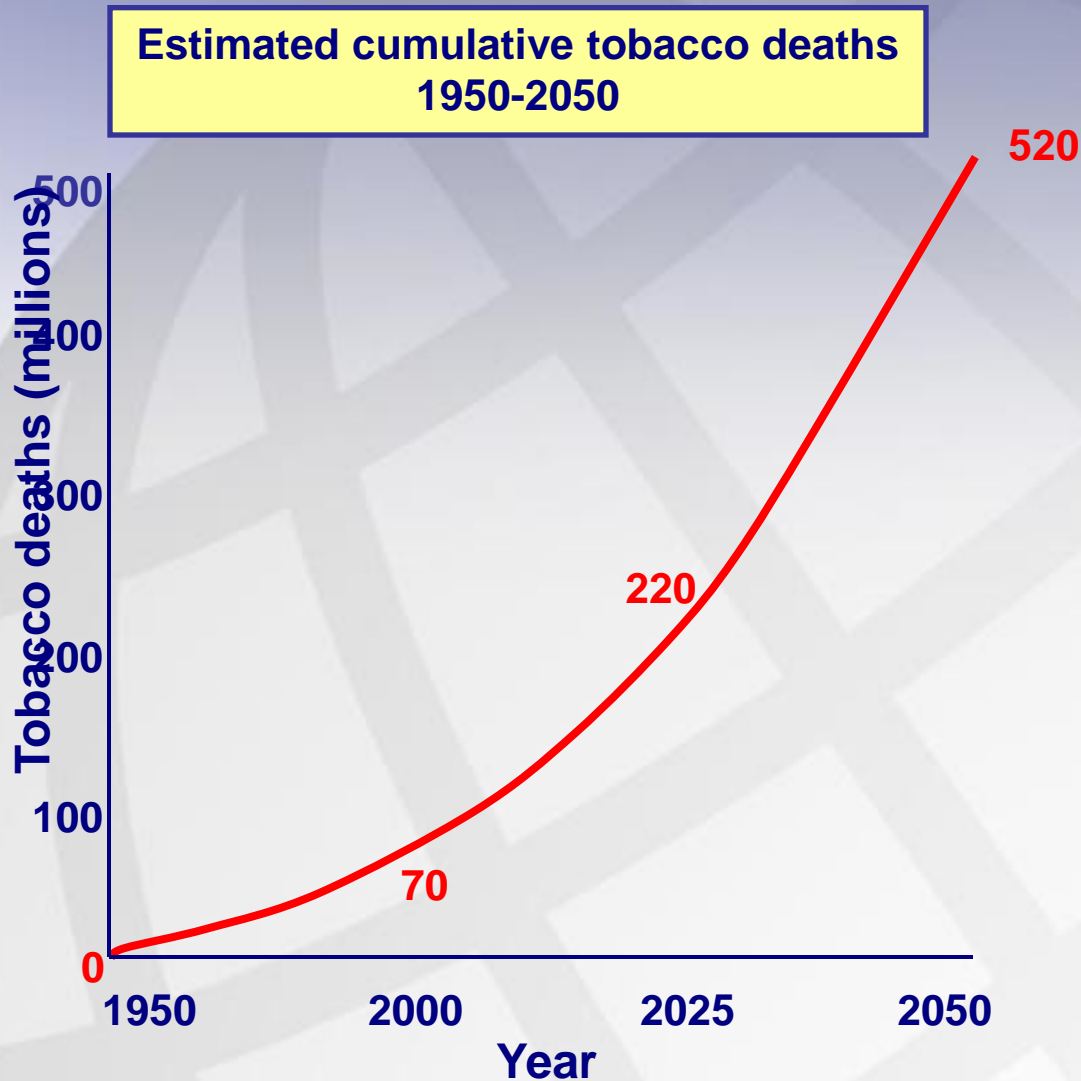
Source: Mathers CD, Loncar D. Projections of global mortality and burden of disease from 2002 to 2030. *PLoS Medicine*, 2006, 3(11):e442.

# Some Statistics on Global Tobacco Use

- ◆ 1.3 billion people smoke
  - 82% live in low-and middle-income countries
  - 650 million will die of tobacco-related causes
- ◆ 20th Century: 100 million tobacco-related deaths
- ◆ 21st Century: 1 billion tobacco-related deaths
- ◆ 5.4 million will die this year
- ◆ By 2030: 8 million will die/year—80% in developing countries
- ◆ WHO: Leading preventable cause of death and disability in the world



# Facing the Challenge



How can we most effectively flatten this curve?

Population-level interventions such as FCTC policies

World Bank. *Curbing the epidemic: Governments and the economics of tobacco control*. World Bank Publications, 1999. p80.

# Framework Convention on Tobacco Control



- ◆ 1999-2003: creation of the FCTC (first ever health treaty)
- ◆ Unanimously adopted in 2003
- ◆ Already ratified by 152 nations
- ◆ Conferences of the Parties:
  - COP-1: Feb 2006 in Geneva
  - COP-2: July 2007 in Bangkok
  - COP-3: Nov 2008 in S. Africa

# Main Provisions of the FCTC

- ◆ More prominent warning labels
- ◆ Eliminating “light” “mild” and other deceptive names
- ◆ Restricting/prohibiting advertising/promotion
- ◆ Smoke-free public places
- ◆ Higher taxation
- ◆ Support for dependence/cessation
- ◆ Regulation of tobacco products
- ◆ Measures to reduce illicit trade

\*\*\* **EVIDENCE-BASED** \*\*\*

# Research—>Policy

## *Article 11*

### *Packaging and labelling of tobacco products*

1. Each Party shall **within a period of three years after entry into force of this Convention** for that Party, adopt and implement, in accordance with its national law, effective measures to ensure that:

(a) tobacco product packaging and labelling do not promote a tobacco product by any means that are false, misleading, deceptive or likely to create an erroneous impression about its characteristics, health effects, hazards or emissions, including any term, descriptor, trademark, figurative or any other sign that directly or indirectly creates the false impression that a particular tobacco product is less harmful than other tobacco products. These may include terms such as “low tar”, “light”, “ultra-light”, or “mild”; and

**Over 100 countries must enhance their warning labels within 3 years**

## *Article 13*

### *Tobacco advertising, promotion and sponsorship*

1. Parties recognize that a comprehensive ban on advertising, promotion and sponsorship would reduce the consumption of tobacco products.

2. Each Party shall, in accordance with its constitution or constitutional principles, undertake a comprehensive ban of all tobacco advertising, promotion and sponsorship. This shall include, subject to the legal environment and technical means available to that Party, a comprehensive ban on cross-border advertising, promotion and sponsorship originating from its territory. In this respect, **within the period of five years after entry into force of this Convention** for that Party, each Party shall undertake appropriate legislative, executive, administrative and/or other measures and report accordingly in conformity with Article 21.

**Over 120 countries must implement some kind of ad/promo/sponsorship restriction/ban within 5 years**

# FCTC: Challenges on the Road from Ratification to Implementation

- ◆ Policymakers need guidance in the development of strong, evidence-based protocols
- ◆ Current lack of evidence base on the impact of policies
  - Lack of evaluation data in some policy domains
  - Virtually all data from high-income countries
  - Relatively weak study designs
- ◆ There are other sources of information available to policymakers in the absence of good evidence: the tobacco industry

# Randomized Controlled Trials

- ◆ Best method for isolating possible causes and testing their effects
- ◆ But not possible to conduct RCTs on policies in the real world: Cannot randomly assign people to policies or policies to people
- ◆ What then can you do to evaluate tobacco control policies?

# Quasi-Experimental Designs

- ◆ “Natural experiments”
- ◆ Measure individuals on key variables before and after the policy has been introduced
- ◆ Compare pre-post change in the policy group with a control/comparison group: measure these individuals before and after who did NOT experience the introduction of the policy

Experimental Group:                    O - - X - - O

Control/comparison Group:        O - - - - - O

# Implications for Evaluating National-Level Policies



















- ◆ To evaluate national-level policies, one needs international studies
- ◆ The methods and measures should be identical or functionally equivalent so that the data from different countries can be compared



# The ITC Surveys

- ◆ Extensive surveys of representative samples of adult smokers in each country
- ◆ Cohort survey: same individuals surveyed every year
- ◆ Identical/similar methods and measures in all countries
- ◆ Measures relevant to each of the FCTC demand policies
- ◆ Focus on evaluation at the individual level
- ◆ Additional parallel surveys of youth, non-smokers, and smokeless tobacco users in some countries
- ◆ Capitalize on natural experiments created by FCTC policies being introduced throughout the world

# The ITC Surveys

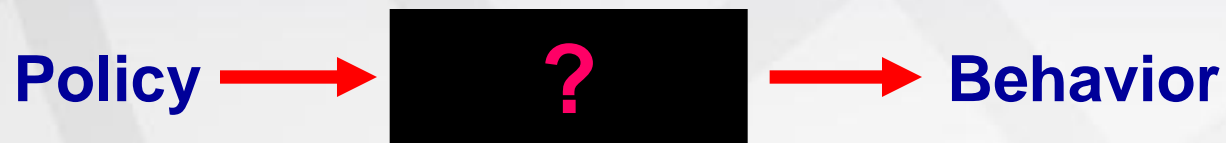
	Country	Mode	N (smokers)	N (others)	2002	2003	2004	2005	2006	2007	2008	2009
1	Canada		2,000									
2	United States		2,000									
3	United Kingdom		2,000									
4	Australia		2,000									
5	Ireland/Scotland		2,000	900 NS								
6	Thailand		2,000	1,000 Youth								
7	Malaysia		2,000	1,000 Youth								
8	South Korea		1,000									
9	China		5,600	1,400 NS								
10	Mexico		1,000									
11	Uruguay		1,000									
12	New Zealand		2,000									
13	France		1,700	500 NS								
14	Germany		1,700	1,000 NS								
15	Netherlands	 *	2,100 *									
16	Sudan		2,800	2,000 SL,NS								
17	Bangladesh		3,000 ?	1,000 SL,NS								
18	India		12,000 ?	2,000 SL,NS								

\* The ITC Netherlands Survey will sample 1,600 from a large internet Panel and 500 using RDD phone methods

# Research Goals of the ITC Project

**Goal 1: Rigorous evaluation of national-level tobacco control policies of the FCTC**

**Goal 2: To understand how and why these policies work (if they work)**

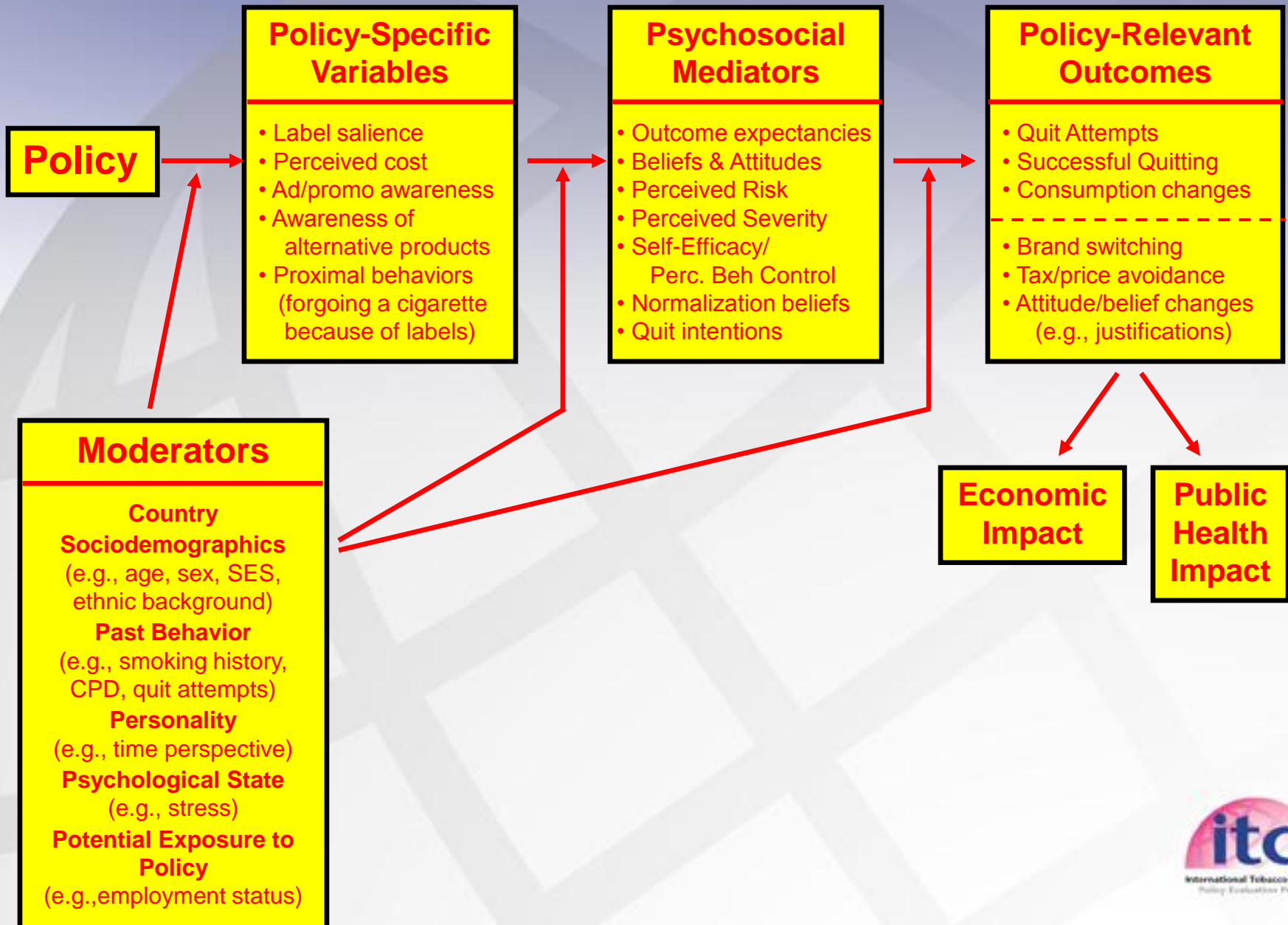


**What's inside the black box?**

**Goal 3: Disseminate findings to policymakers**

- Build evidence base for FCTC
- Promote evidence-based policies

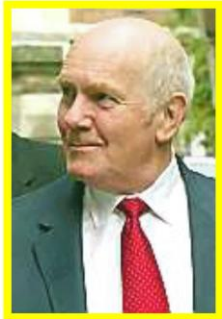
# Conceptual Model of the ITC Project





# **The Impact of Smokefree Legislation (Article 8)**

# Smoke-free pubs lead to smoke-filled homes?

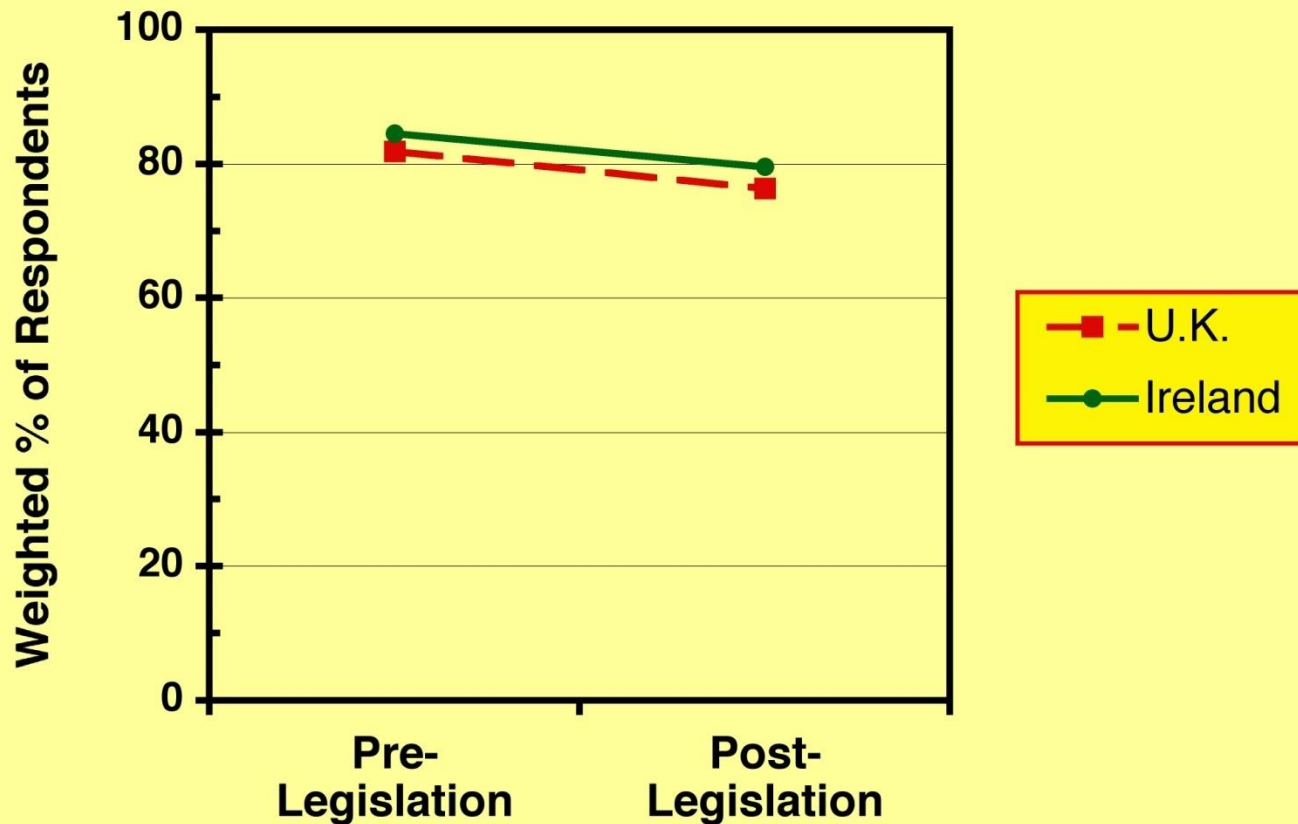


John Reid, former U.K. Secretary of State for Health, at a House of Commons Health Committee Evidence Hearing, Feb. 23, 2005:

In Scotland, for instance, they have decided to go for a complete ban on smoking. I came to the conclusion that that was not a good thing on health grounds, apart from anything else, **because you get a displacement of smoking from some public areas to the home** - and most of the evidence about passive smoking is about the home...

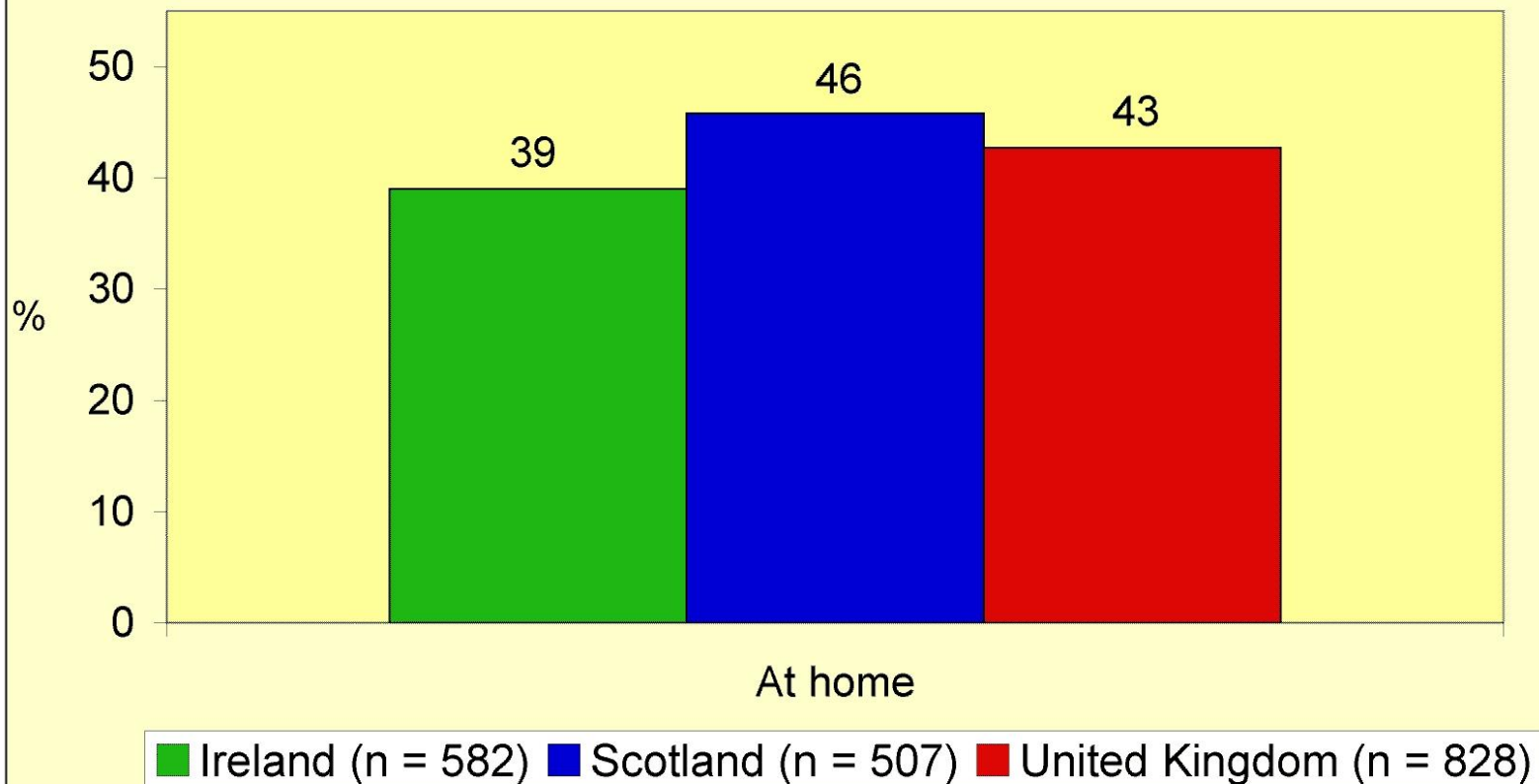
...**what we do know, for instance in Ireland** and we would anticipate in Scotland, is that a percentage of people who previously went to the pub to smoke will now get a carry-out and take it home. **I think the percentage in Ireland is about 15 per cent.**

## Homes Allowing Smoking Inside



Proportion of homes allowing smoking has decreased in Ireland since the ban ( $p=.002$ ): Home bans have increased after the ban

Figure 2. Percent of Cigarettes Smoked per Day that were Smoked Inside the House During the Evening (After Work)  
ITC Scotland/Ireland/UK Survey—Feb-Mar 2006



**AND...22% of Irish smokers report they have placed stronger restrictions on smoking in the home since the ban; only 6% report they have smoked more in the home**

**Hyland et al. (EJPH, June 2007)**



# Research Evidence as Advocacy

**World No Tobacco Day 2007**  
SMOKE-FREE ENVIRONMENTS

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

[Register](#) **COME CELEBRATE WITH US**

[Venue Information](#) 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.

[Protection of Privacy](#)

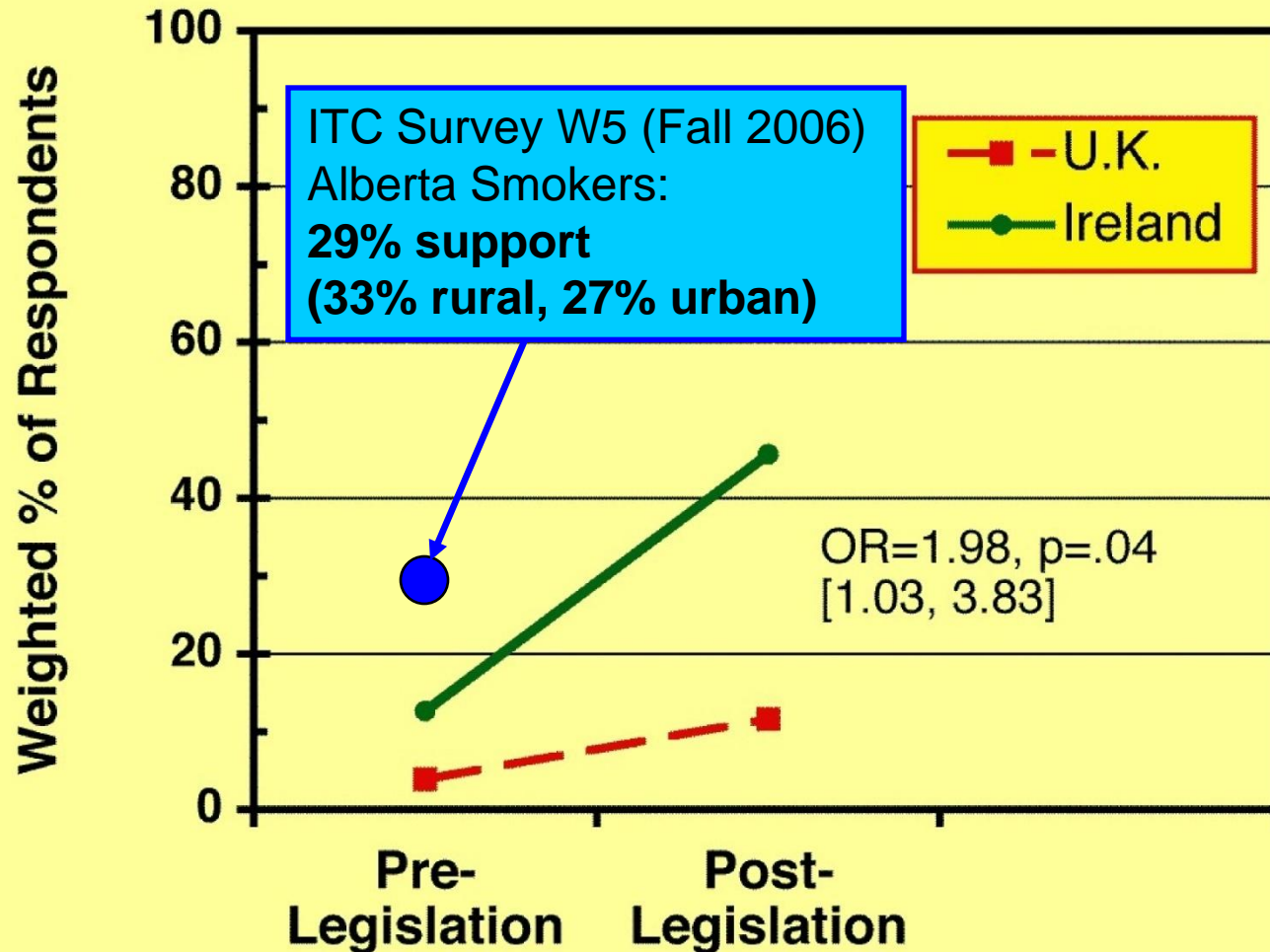
[Contact Us](#)

[Call for Abstracts](#) In recognition of the preventable harm caused by second-hand smoke, the theme for this year's celebration is "Smoke-Free Environments."

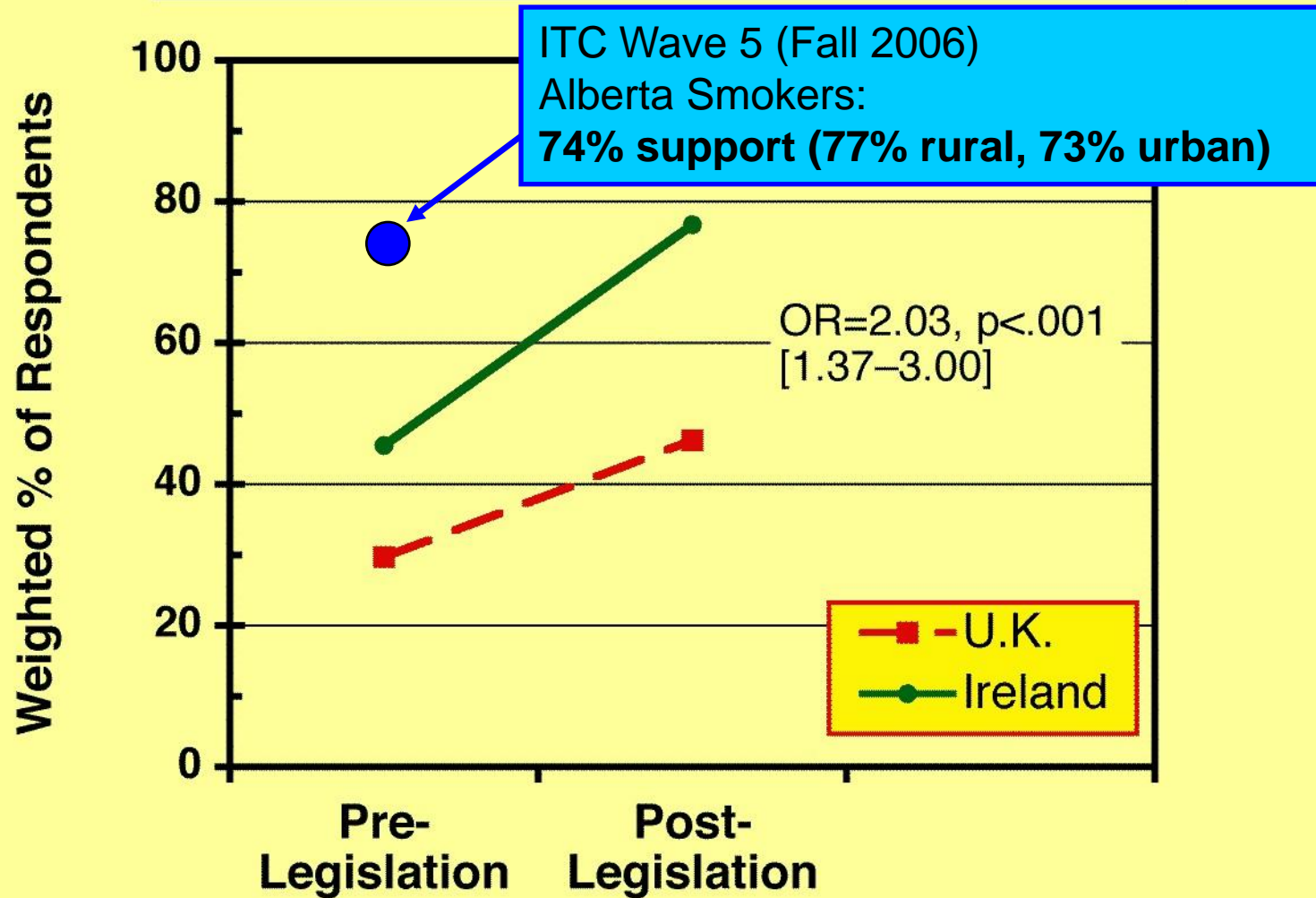
Geoffrey Fong, Ph.D., from the University of Waterloo will be delivering a keynote presentation on the positive impact of smoke-free laws on tobacco reduction efforts from a national and international perspective.

- ◆ Dr. Fong gave a talk for Alberta's Celebration of World No-Tobacco Day, May 2007
- ◆ Contacted advocates/insiders to find out how he could help in their push for 100% smoke-free laws in Alberta:
  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)

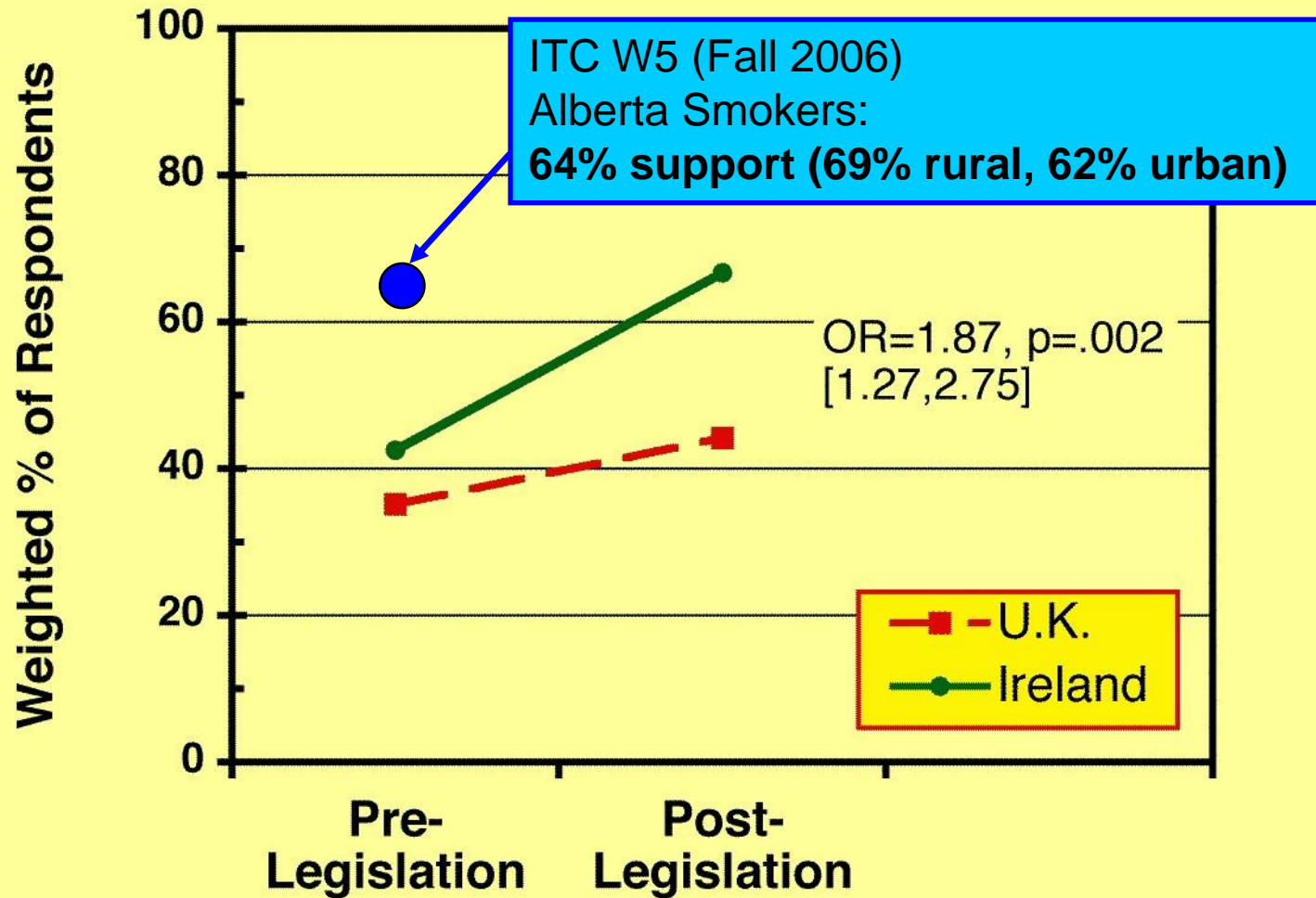
## Support for Total Ban in Bars/Pubs



## Support for Total Ban in Restaurants



## Support for Total Ban in Workplaces



Health Minister was present at the event and asked for the slides saying that “it was just what he needed.” Next day his caucus announced that they would go for 100% smoke-free legislation in Alberta. And on Nov 14, Bill 45 was passed.

 [print](#) |  [send](#)

## **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](http://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:

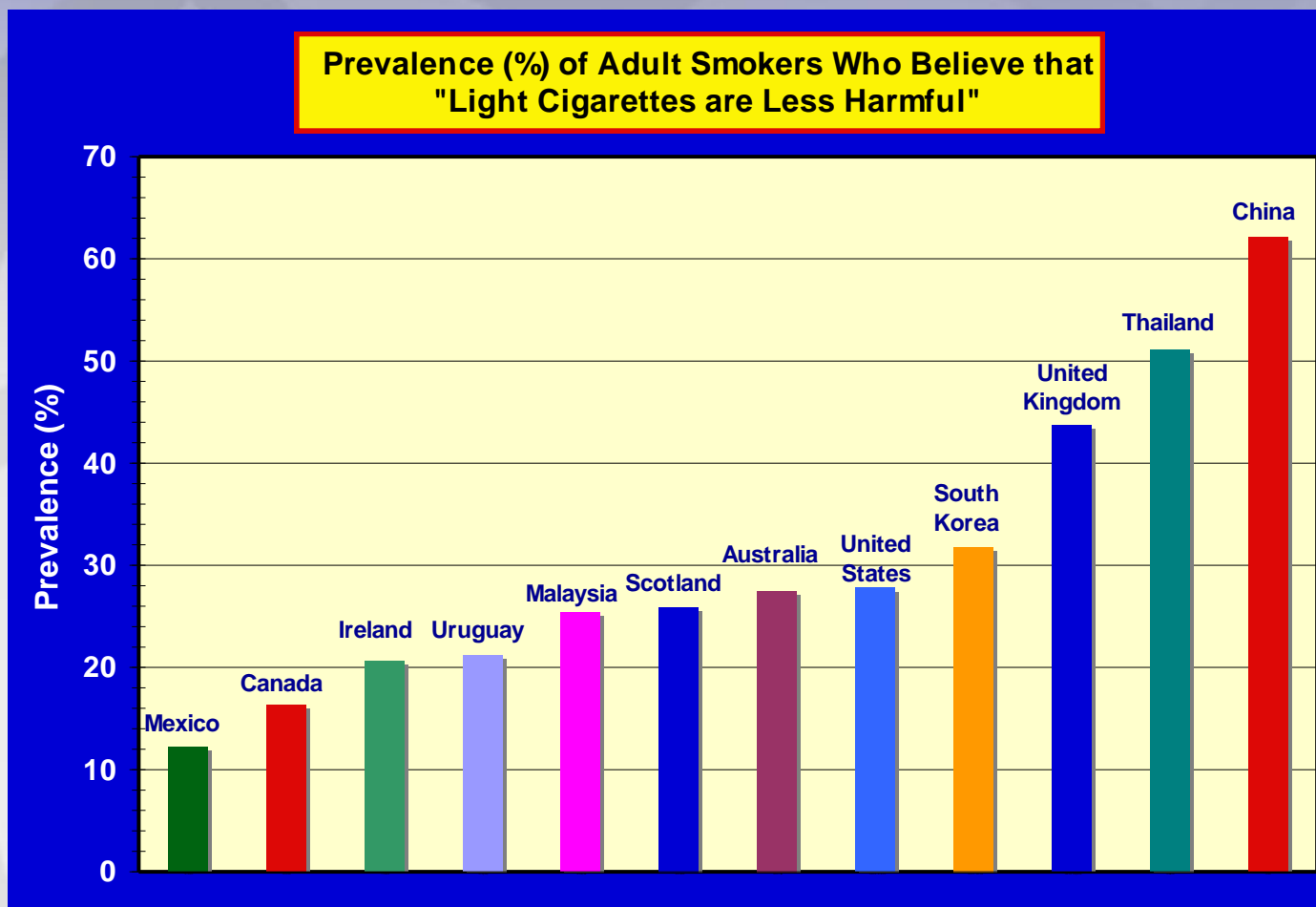
- Prohibit smoking in all public places and workplaces (proposed effective January 1, 2008);
- Ban tobacco displays, promotions and advertising in retail outlets (proposed effective July 1, 2008); and
- Remove tobacco sales from pharmacies, health care facilities and post-secondary campuses (proposed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



International Tobacco Control  
Policy Evaluation Project

# **Labeling and Packaging Regulations (Article 11) Findings from the ITC Project**

# Research Evidence as Early Warning System: Beliefs About “Lights” from 12 ITC Countries



**China has the highest prevalence of misperceptions about “lights”: need for a strong education campaign**

# Direct KE from Researchers

Dr. David Hammond:

- ◆ Presentations to regulators in national consultations on regulatory strategy (*cited in regulation/consultation papers in 12 countries, including the EU*)
- ◆ FCTC working groups, e.g. WHO expert for labeling and packaging regulations (*draft policy with representatives from 153 governments*)
- ◆ Developed a toolkit for packaging and labeling policies ([www.tobaccolabels.org](http://www.tobaccolabels.org))
- ◆ Regional workshops for regulators drafting new regulations



# The ITC Paradigm: not just about tobacco

- ◆ The individual-level approach to evaluation is an important addition to understanding the impact of population-level interventions in tobacco control.
- ◆ Any population-level approach to changing behavior can be evaluated and its impact understood via this paradigm
  - Physical activity and eating behavior
  - Conservation behavior
  - Different mediating variables: same principles of evaluation

# Conclusions

- ◆ Whether the FCTC fulfills its promise will depend on whether the parties implement strong, evidence-based policies
- ◆ The ITC Project is conducting rigorous evaluation of FCTC policies to provide the evidence base to promote strong protocols for the FCTC
- ◆ Research IS advocacy. Relevant, real-time, real-world science is having real impact. BUT...
- ◆ *How do we strengthen the paradigm of social experimentation (i.e. 'learn as we go') for population interventions?*
- ◆ *How do we ensure that impact-oriented scientists have necessary incentives, resources and rewards to do their work*
- ◆ *What KT research might strengthen the research and its impact?*

# International Tobacco Control Policy Evaluation Project

<http://www.itcproject.org>  
<http://www.roswellturc.org>



## ITC Project Research Support



Core support provided by the U.S. National Cancer Institute to the Roswell Park TTURC (P50 CA111236)



Additional major funding provided by the Canadian Institutes of Health Research

