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LIST OF PARTICIPANTS

Ron Borland *(Co-Chair)*
Cancer Control Research Institute
The Cancer Council Victoria
1 Rathdowne Street
Carlton, Victoria 3053
Australia

K. Michael Cummings *(Co-Chair)*
Department of Health Behaviour
Roswell Park Cancer Institute
Elm and Carlton Streets
Buffalo, NY 14263
USA

Timothy Baker *(not attending)*
Center for Tobacco Research and Intervention
Univeristy of Wisconsin Medical School
1930 Monroe Street, Suite 200
Madison, WI 53711-2027
USA

Ursula Bauer
Tobacco Control Program
New York State Department of Health
ESP Corning Tower, Room 710
Albany, NY 12237-0676
USA

Frank J. Chaloupka
Economics, College of Business Administration
Health Policy and Administration
University of Illinois at Chicago
601 S. Morgan St, Room 2103
Chicago, IL 60607-7121
USA

Carolyn Dresler *(not attending)*
Tobacco Prevention and Cessation Program
Arkansas Department of Health
4815 W Markham St.
PO Box 1437, Slot H-3
Little Rock, AR 72203-1437
USA

Jean-Francois Etter
Faculte de Medecine
Universite de Geneve
1 rue Michel-Servet
CH-1211 Geneve 4
Switzerland

Geoffrey T. Fong
Ontario Institute for Cancer Research and Department of Psychology
University of Waterloo
200 University Avenue West
Waterloo, Ontario N2L 3G1
Canada

Gary A. Giovino
Department of Health Behavior
School of Public Health and Health Professions
SUNY at Buffalo
622 kimball Tower
Buffalo, NY 14214-3079
USA

G. Emmanuel Guindon
Centre for Health Economics and Policy Analysis
Health Sciences Centre 3H1 area
McMaster University
1200 Main Street West
Hamilton, Ontario L8N 3Z5
Canada

Prakash C. Gupta
Healis-Sekhsaria Inst. for Public Health
Plot No. 28, Sector 11
CBD Belalpur
601/B Great Eastern Chambers
Navi Mumbai
India

David Hammond
Department of Health Studies and Gerontology
University of Waterloo
200 University Avenue West
Waterloo, Ontario N2L 3G1
Canada

Gerard Hastings *(not attending)*
Centre for Tobacco Control Research
University of Stirling and the Open University
Stirling FK9 4LA
Scotland

Andrew Hyland
Department of Health Behaviour
Roswell Park Cancer Institute
Elm and Carlton Streets
Buffalo, NY 14263
USA

Luk Joossens, *(not attending)*
Belgian Foundation Against Cancer
479 Chaussée de Louvain
B-1030 Brussels
Belgium

Alan Lopez, *(not attending)*
The University of Queensland
Herston Road
Herston Qld 4006
Australia

Anne Marie MacKintosh *(not attending)*
Institute for Social Marketing
University of Stirling and the Open University
Stirling FK9 4LA
Scotland

Ann McNeill
Division of Epidemiology & Public Health
University of Nottingham
Clinical Sciences Building
Notthingham NG5 1BP
UK

Mark Parascandola
Tobacco Control Research Branch
National Cancer Institute
6130 Executive Blvd. MSC 7337
Bethesda, MD 20892
USA

Armando Peruga
Tobacco Free Initiative
World Health Organization
Geneva
Switzerland

Patrick Petit
Tobacco Free Initiative
World Health Organization
Geneva
Switzerland

Megan E. Piper
Center for Tobacco Research & Intervention
University of Wisconsin
Medical School
1930 Monroe St., Suite 200
Madison, WI 53711-2027
USA

James F. Thrasher
Health Promotion, Education and Behavior
School of Public Health
University of South Carolina
800 Sumter Street, Room # 215
Columbia, SC 29208
USA; and
Instituto Nacional de Salud Pública,
Cuernavaca,
Mexico

Charles (Wick) Warren
Office on Smoking and Health
Centers for Disease Control and Prevention
4770 Buford Highway, NE
Atlanta, GA 30341-3717
USA

Representatives
Nathan Jones
Office on Smoking and Health
Global Tobacco Control Program
Centers for Disease Control and Prevention
4770 Buford Highway, NE
Atlanta, GA 30341-3717
USA

Martina Potschke-Langer
Cancer Prevention and WHO Collaborating Center for Tobacco Control
Deutsches Krebsforschungszentrum
Im Neuenheimer Feld 280 D-69120 Heidelberg
Germany

IARC Secretariat
Andrea Altieri
Robert Baan
Julien Berthiller
Paolo Boffetta (Group Head)
Lars Egevad
Fabrizio Giannandrea (Post-Meeting)
Julia Heck
María E. León (Responsible Officer)
Beatrice Secretan
Kurt Straif

Administrative assistance
Catherine Benard (Secretarial)
Latifa Bouanzi (Library)
John Daniel (Editor)
Jennifer Donaldson (Editor)
Roland Dray (Graphics)
Sharon Grant (Library)
Georges Mollon (Photography)
Sylvia Moutinho (Secretarial)
Annick Rivoire (Secretarial)
Josephine Thevenoux (Layout)

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Preface

The *IARC Handbooks on Cancer Prevention* have traditionally presented the scientific evidence on the effects of interventions, such as sun protection or dietary chemoprevention, on preventing cancer, as well as the evaluation of the strength of the evidence in addressing the alleged protective effect.

In Volume 11, the first dedicated to tobacco control, the effects of smoking cessation on the risk of developing or dying of cancer, cardiovascular diseases, or chronic obstructive pulmonary disease were examined. In that volume, the health benefits of quitting smoking were investigated by comparing epidemiological studies reporting the risk of disease in never, former, and current smokers, as well as differences in risk with length of smoking abstinence, when available. An evaluation of the weight of the evidence was given for each disease contemplated.

For IARC, Volume 11 was exceptional in including disease outcomes other than cancer. Given the prominent etiologic position of smoking in other disease outcomes, limiting the review to cancer would have given a partial picture of the benefits derived from quitting smoking. How individuals overcome the smoking habit to achieve sustained abstinence has not been covered in the Handbooks. However, we know from numerous publications that one way of inducing quitting in a proportion of the population of smokers is through policy measures, implemented by local, regional, and/or national governments, intended to reduce both the number of smokers and the amount smoked in persistent users (e.g. by increasing the cost of tobacco products through the use of pricing and taxation policies). Interventions, which have been implemented at the individual and societal level to control the use of tobacco and concomitant health effects, have been adopted at different paces and with varying degrees of comprehensiveness in countries around the world, generating an irregular response to the tobacco epidemic. These interventions have included, to list a few, total or partial bans on smoking in work and public places; suppression of tobacco advertising, promotion, and sponsorship; anti-tobacco education and communication campaigns to raise awareness; changes to tobacco product labeling; and smoking cessation services.

A global, coordinated effort to use legislation and associated programmes to arrest the tobacco use epidemic is now led by the World Health Organization through the Framework Convention on Tobacco Control (WHO FCTC). The WHO FCTC encompasses a range of measures, in their totality representing a comprehensive approach designed to control tobacco use and supply. The body of policies stipulated in the WHO FCTC treaty became binding international law on February 27, 2005. Of the 38 articles, articles 6 to 14 cover policy interventions directed at preventing tobacco use, decreasing consumption, reducing toxicity, protecting non-smokers, and diminishing tobacco use initiation. Articles 15 to 17 relate to measures controlling the availability of tobacco (WHO, 2003). In other words, the policies are a series of measures conceived to counteract multiple domains of tobacco availability and use. The joint observance of the treaty by countries around the world will make it a global response to the tobacco epidemic. However, the reach of the policy interventions included in the WHO FCTC will depend on how effectively countries formulate and implement these policies. As of November 7, 2008, 161 countries have become parties to the treaty (http://www.who.int/tobacco/framework/en/index.html; accessed November 10, 2008).

The FCTC has propelled tobacco control into a new era, as

countries all over the world incorporate its policies and recommendations into their own laws. As tobacco control policies are formulated and implemented, it is important that they undergo rigorous evaluation. In the same way that evidence-based medicine has been built from thorough evaluation of treatment options, evidence-based public health must build on a database of rigorous evaluations of public health policies. Such knowledge will allow implementation of the most powerful policy interventions, and will do so in ways that will maximize their effectiveness.

Towards this goal, IARC convened a working group of international tobacco control experts from March 12-19, 2007 to propose a framework for guiding the evaluation of tobacco control policies expected to be formulated worldwide in response to WHO FCTC. Four broad questions were considered by the working group, each with several more specific related sub-questions, to guide the review of the scientific literature on the methods and measures of tobacco policy evaluation. The broad questions cover how the effects of a policy are determined, the core constructs for understanding how and why a given policy works, the potential moderator variables to consider when evaluating a given policy, and the data sources that might be useful for evaluation.

The working group proposed a common conceptual framework to guide future FCTC policy evaluation, specifying two levels of mediating variables: those specific to the policy, and those that are part of more general pathways to the outcomes of interest. It also accepted that various other factors (moderators) might affect the size of the effect, and recognized the possibility of effects incidental to those an intervention is designed to produce. Given the already well-established relationship between tobacco use and disease, and the lag time between reductions in tobacco use prevalence and observed reductions in disease outcomes, this *Handbook* (**Volume 12**) recommends that tobacco use be utilized as the appropriate endpoint for most policy evaluations. The group elaborated on the model most completely for tobacco use outcomes, but it was also applied to policies affecting product harmfulness.

Included in this *Handbook* are logic models outlining relevant constructs for evaluating the effectiveness of policies on tobacco taxation, smoke-free environments, tobacco product regulations, limits on tobacco marketing communications, product labeling, anti-tobacco public communication campaigns, and tobacco use cessation interventions. Additionally, it provides examples of measures used to assess key constructs, with special attention to measurement issues with survey methods. Also provided are descriptions of sources of data on tobacco control policies, tobacco production and trade, and repositories of youth and adult surveillance surveys. These sources of information are particularly important for making comparisons between countries, and in some cases can be used to demonstrate the impact of policies, although not the mechanisms by which they occur. Thus, **Volume 12** is offered as a guide to evaluators in the field, and consequently a frame for future IARC *Handbooks* that focus on evaluating the impacts of societal level interventions to control cancer, and other preventable diseases, caused by tobacco use.