

WHO STUDY GROUP ON TOBACCO PRODUCT REGULATION

Report on the Scientific Basis of
Tobacco Product Regulation:
Fourth Report of a WHO Study Group



World Health
Organization

WHO STUDY GROUP ON TOBACCO PRODUCT REGULATION

Report on the Scientific Basis of
Tobacco Product Regulation:
Fourth Report of a WHO Study Group



**World Health
Organization**

WHO Library Cataloguing-in-Publication Data

WHO study group on tobacco product regulation : report on the scientific basis of tobacco product regulation : fourth report of a WHO study group.

(WHO Technical report series; 967)

1.Tobacco use disorder - prevention and control. 2.Tobacco industry - legislation. 3.Tobacco control campaigns. 4.Tobacco - chemistry. 5.Metals, Heavy - adverse effects. 6.Metals, Heavy - toxicity. 7.Metals, Heavy - standards. 8.Guidelines. I.World Health Organization. II.WHO Study Group on Tobacco Product Regulation. III.Series.

ISBN 978 92 4 120967 0

(NLM classification: QV 137)

ISSN 0512-3054

© World Health Organization 2012

All rights reserved. Publications of the World Health Organization are available on the WHO web site (www.who.int) or can be purchased from WHO Press, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel.: +41 22 791 3264; fax: +41 22 791 4857; e-mail: bookorders@who.int). Requests for permission to reproduce or translate WHO publications—whether for sale or for noncommercial distribution—should be addressed to WHO Press through the WHO web site (http://www.who.int/about/licensing/copyright_form/en/index.html).

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

This publication contains the collective views of an international group of experts and does not necessarily represent the decisions or the policies of the World Health Organization.

Printed in Italy

Contents

Participants	v
1. Introduction	1
2. Recommendations on toxic elements in tobacco and in cigarette smoke	3
Levels of toxic elements of greatest concern by tobacco type and geographical region	4
Research requirements	7
Regulatory recommendations	8
3. Recommendations on the basis for a regulatory framework to reduce the dependence potential of tobacco products	11
Preface	11
Background	12
Terminology and definitions	14
Precedents and experience in regulation of pharmaceutical products	15
Dependence potential and product attractiveness and other factors that modulate tobacco product use, risk for dependence and harm	16
Challenges in regulating tobacco products as compared with drug products	17
Nicotine policy	19
Conclusions	21
Recommendations for regulatory policy	22
Recommendations for research to guide and evaluate regulatory actions and implementation to reduce tobacco product dependence potential	23
4. Overall recommendations	25
Recommendations on toxic elements in tobacco and in cigarette smoke	25
Recommendations on the basis for a regulatory framework to reduce the dependence potential of tobacco products	26
5. References	29
Annex 1. Toxic elements in tobacco and in cigarette smoke	37
Preface	37
Background	37
Scope	38
Instrumentation commonly used to analyse tobacco and smoke	39
Toxic metals in smokeless tobacco products	40
Toxic metals in smoked tobacco products	42
Selected biological and public health effects of metals	43
Summary	67
References	69

Participants in the sixth meeting of the WHO Study Group on Tobacco Product Regulation

Buenos Aires, Argentina, 22–24 November 2010

Members

- Dr D.L. Ashley, Chief, Emergency Response and Air Toxicants Branch, Centers for Disease Control and Prevention, Atlanta, Georgia, United States of America
- Dr O.A. Ayo-Yusuf, Associate Professor, School of Dentistry, University of Pretoria, South Africa
- Dr Vera Luiza da Costa e Silva, Independent Consultant, Senior Public Health Specialist, Rio de Janeiro, Brazil
- Dr M. Djordjevic, Program Director, National Cancer Institute, Division of Cancer Control and Population Sciences, Tobacco Control Research Branch, Bethesda, Maryland, United States of America
- Dr N. Gray, Honorary Senior Associate, Cancer Council Victoria, Melbourne, Australia
- Dr S.K. Hammond, Professor of Environmental Health Sciences, School of Public Health, University of California at Berkeley, Berkeley, California, United States of America
- Dr J. Henningfield, Professor (Adjunct), Behavioral Biology, The Johns Hopkins University School of Medicine; Vice President, Research, Health Policy, and Abuse Liability Pinney Associates, Bethesda, Maryland, United States of America
- Dr A. Opperhuizen, Head, Laboratory for Health Protection Research, National Institute for Public Health and the Environment, Bilthoven, The Netherlands
- Dr C. Robertson, Ruth G. and William K. Bowes Professor in the School of Engineering, Department of Chemical Engineering, Stanford University, Stanford, California, United States of America
- Dr G. Zaatari (*Chair*), Professor, Department of Pathology and Laboratory Medicine, American University of Beirut, Beirut, Lebanon

WHO secretariat (Tobacco Free Initiative, WHO, Geneva, Switzerland)

- Dr D.W. Bettcher, Director
- Mr R. Minhas, Technical Officer
- Ms E. Tecson, Administrative Assistant
- Ms G. Vestal, Technical Officer

1. Introduction

The sixth meeting of the World Health Organization (WHO) Study Group on Tobacco Product Regulation (TobReg) was held in Buenos Aires, Argentina, on 22–24 November 2010. TobReg is mandated to provide the WHO Director-General with scientifically sound, evidence-based recommendations for Member States about tobacco product regulation. In line with the provisions of Articles 9 and 10 of the WHO Framework Convention on Tobacco Control (FCTC), TobReg identifies approaches for regulating tobacco products that pose significant public health issues and raise questions for tobacco control policy.

At its sixth meeting, after reviewing background documents and obtaining clarifications from the presenters, the Study Group discussed heavy metals in tobacco and cigarette smoke, generational and trans-generational tobacco-induced pathogenesis and evidence on epigenetic mechanisms, cigarette butt pollution, a novel environmental approach to reducing tobacco consumption and the rationale for a regulatory framework to reduce the dependence potential of tobacco products.

Regulation of tobacco products is essential for tobacco control and is endorsed by the WHO FCTC in provisions of its Articles 9, 10 and 11. Regulation serves public health goals by meaningful surveillance of the manufacture, packaging, labelling and distribution of tobacco products. Scientifically based principles for implementing the articles create synergy and mutual

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_28437

