









# Tobacco health warnings in China

EVIDENCE OF EFFECTIVENESS AND IMPLICATIONS FOR ACTION









WHO Library Cataloguing-in-Publication Data

Tobacco health warnings in China: evidence of effectiveness and implications for actions.

- 1. Smoking cessation. 2. Tobacco products. 3. Tobacco use disorder prevention and control.
- 4. Tobacco control campaigns. I. World Health Organization Regional Office for the Western Pacific.

ISBN-13 978 92 9061 653 5 (NLM Classification: WM 270)

Suggested citation: World Health Organization Western Pacific Region, University of Waterloo, ITC Project and ThinkTank Research Center for Health Development. Tobacco health warnings in China: evidence of effectiveness and implications for action. Manila: World Health Organization Regional Office for the Western Pacific; 2014

© World Health Organization 2014

All rights reserved.

Publications of the World Health Organization are available on the WHO web site (http://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 non-commercial distribution – should be addressed to WHO Press through the WHO web site (http://www.who.int/about/licensing/copyright\_form/en/index.html). For WHO Western Pacific Region Publications, requests for permission to reproduce should be addressed to Publications Office, World Health Organization, Regional Office for the Western Pacific, P.O. Box 2932, 1000, Manila, Philippines, fax: +632 521 1036, e-mail: publications@wpro. who.int

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 borderlines 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.

We are grateful for copyright permission to use Figure 8 from India's Ministry of Health and Family Welfare; the images in Figure 9 from the Kazakhstan Ministry of Health (copyright holder of the 'Baby' image in the Russian warning label) and the Thailand Ministry of Public Health (copyright holder of the 'Teeth' image in the Russian warning label); Figure 10 from the Hong Kong Special Administrative Region; Figure 11 from the Government of Macao Special Administrative Region, Health Bureau; and Figure 17 from the Mauritius Ministry of Health and Quality of Life.

Printed in Beijing, China.

# **TABLE OF CONTENTS**

List of figures and tables	i\
Acknowledgements	\
Messages from:	
- WHO Representative in China	1
- Director, Chinese Center for Disease Control and Prevention	
- Director, ThinkTank Research Center for Health Development	3
- Principal Investigator, ITC Project	4
Executive summary	5
INTRODUCTION	8
PICTORIAL HEALTH WARNINGS	10
China's National Tobacco Control Plan	
Health warnings as a communications tool	11
Impact of health warnings on smoking rates	
Recent changes to health warnings in China	_
Current health warnings in China	
Chinese smokers and awareness of smoking-related harm	16
HEALTH WARNINGS IN CHINA	
How does China compare to the rest of the world?	
Other countries and areas:	
- Brazil	
– India – Russian Federation	
- South Africa	
- Hong Kong (China)	-
- Macao (China)	
– Canada	
– Australia	
ITC CHINA SURVEY	26
Effectiveness of China's health warnings	26
ITC KEY FINDINGS	
Benefits of switching from text-only to pictorial health warnings	37
ADVOCATING FOR PICTORIAL HEALTH WARNINGS IN CHINA	
ThinkTank Research Center for Health Development's health warnings campaign	
The practice of gifting cigarettes in China	38
HEALTH WARNINGS: SUMMARY AND RECOMMENDATIONS	40
References	/11

# LIST OF FIGURES AND TABLES

Figure 1.	China's Oct. 2008–March 2012 health warnings	13
Figure 2.	China's April 2012 revised health warnings	14
Table 1.	Summary of China's current health warnings with respect to WHO FCTC Article 11 requirements and Article 11 Guidelines	15
Figure 3.	Percentage of smokers and non-smokers who believe that cigarette smoking causes specific health effects, Wave 3 (May-Oct. 2009)	16
Figure 4.	Percentage of smokers who believe that cigarette smoking causes specific health effects, by wave	17
Figure 5.	Percentage of male smokers who believe that second-hand smoke causes lung cancer in non-smokers, by country	18
Figure 6.	Percentage of male smokers who "often" or "very often" thought about the harm of smoking to themselves in the last month, by country	19
Figure 7.	Percentage of male smokers who said that warning labels on cigarette packages made them think of the health risks of smoking "a lot", by country	20
Figure 8.	Examples of India's pictorial health warnings on smokeless and smoked tobacco products	22
Figure 9.	Examples of the Russian Federation's pictorial health warnings on cigarette packages	22
Figure 10.	Examples of pictorial health warnings on cigarette packages in Hong Kong (China)	23
Figure 11.	Examples of pictorial health warnings on cigarette packages in Macao (China)	24
Table 2.	ITC survey questions on health warnings	27
Figure 12.	Measures of health warning effectiveness before and after changes to warning labels in China	28
Figure 13.	Percentage of male smokers who "often" or "very often" noticed warning labels in the last month, before and after warning label changes were introduced in China (Oct. 2008) and Malaysia (Jan. 2009)	29
Figure 14.	Percentage of male smokers who reported that warning labels made them think about quitting smoking "a lot", before and after warning label changes were introduced in China (Oct. 2008) and Malaysia (Jan. 2009)	30
Figure 15.	Percentage of male smokers who reported that they avoided the warning labels in the last month, before and after warning label changes were introduced in China (Oct. 2008) and Malaysia (Jan. 2009)	31
Figure 16.	Percentage of male smokers who gave up a cigarette at least once in the last month due to the warning labels, before and after warning label changes were introduced in China (Oct. 2008) and Malaysia (Jan. 2009)	
Figure 17	Pictorial health warning in Mauritius.	
_	Male cigarette smokers' opinions on whether there should be more, less, or the same amount	,,
	of health information on cigarette packages, by country	34
Figure 19.	Images of health warnings used in the study, including old and new Chinese health warnings	35
Figure 20.	Mean effectiveness ratings of each health warning: How effective would each label be in motivating	
	smokers to quit? (All respondents)	36

## **ACKNOWLEDGEMENTS**

This report was prepared for the World Health Organization, China, by Thomas Agar, Lorraine Craig, Dr Geoffrey T. Fong and Dr Anne C.K. Quah of the International Tobacco Control Policy Evaluation Project (ITC Project) at the University of Waterloo. The authors are grateful to Dr Angela Pratt, Technical Officer, Tobacco Free Initiative World Health Organization, China, for her leadership in reviewing and helping to define the content of the report, and for coordinating peer review. We are grateful to Dr Qiang Li, former ITC China Project Manager, Chinese Center for Disease Control and Prevention (China CDC), for providing comments on previous drafts of this report and for contributing to the Chinese translation of the report. We also thank Guoze Feng, current ITC China Project Manager, China CDC, for contributing to the Chinese translation. We are grateful to Congxiao Wang, China CDC, and Dr Michael C. Fong for checking the Chinese translation. Funding for this report was provided by WHO, China, with the support of Bloomberg Philanthropies. Additional support was provided to the ITC Project by a Senior Investigator Award from the Ontario Institute for Cancer Research, a Prevention Scientist Award from the Canadian Cancer Society Research Institute and the 2011 Canadian Institutes of Health Research Knowledge Translation Award to Dr Geoffrey T. Fong.

We are also grateful to Sonya Lyon for her assistance in the preparation of the report.

"It is well and truly time for China to kick its tobacco habit. Indeed, the country's future economic and social prosperity depends on it. The evidence and recommendations presented in this report, if implemented, will help China to do just that."

Dr Bernhard Schwartländer WHO Representative in China



# MESSAGE FROM WHO REPRESENTATIVE IN CHINA

Around the world, the burden of morbidity and mortality from noncommunicable diseases (NCDs) is growing rapidly. And no more so than in large, fast-developing countries such as China: NCDs account for 63% of deaths worldwide, but more than 80% of deaths in China. The changing nature of the global burden of disease is one of the great public health challenges of our time.

In recognition of the enormous threat NCDs pose to health — and to economic and social development — in 2011 the United Nations held the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases, only the second time the General Assembly has met specifically to discuss a health issue (the first time was to discuss HIV/AIDS). Acknowledging the "challenge of epidemic proportions" presented by NCDs, the Political Declaration of the High-level Meeting committed to accelerating implementation of the WHO Framework Convention on Tobacco Control (WHO FCTC) in order to substantially reduce tobacco consumption, as one means of tackling the rising tide of NCDs.

It is in this context that WHO China is delighted to be supporting this important policy report on the evidence for stronger health warnings on tobacco packages in China. Full implementation of the WHO FCTC and its guidelines is one of the best investments countries can make to tackle NCDs; and implementing large, pictorial health warnings on tobacco products is one of the "best buys" available to governments for tobacco control.

This is because, as this report demonstrates, large, pictorial health warnings are one of the most effective means of warning tobacco users about the health hazards of their tobacco consumption and encouraging them to quit. They are also one of the most cost-effective interventions available to governments, as they require virtually no financial resources to implement or enforce.

Tobacco use already exacts a terrible toll on China, killing more than 1 million people every year. Right now, around 28% of China's over 1 billion adults are smokers, including more than half of China's approximately 570 million adult men. Given that one in every two smokers will die as a result of tobacco use, many prematurely, tobacco consumption will have a potentially catastrophic effect on China's society and economy in the future if current smoking rates are not reduced.

It is well and truly time for China to kick its tobacco habit. Indeed, the country's future economic and social prosperity depends on it. The evidence and recommendations presented in this report, if implemented, will help China to do just that.

Sun

Dr Bernhard Schwartländer WHO Representative in China December 2013



# MESSAGE FROM DIRECTOR, CHINESE CENTER FOR DISEASE CONTROL AND PREVENTION

The harm caused by tobacco is one of the most serious public health problems in the world. China is home to more than 300 million smokers, nearly one third of the world's total. Tobacco use is the main cause of many diseases, including chronic obstructive pulmonary disease, cardiovascular diseases, and lung cancer and other cancers. Tobacco use is the leading cause of death in China, accounting for more than 1 million deaths annually. This figure is expected to double by 2020 if the current smoking rate is not controlled. Tobacco-related noncommunicable diseases pose a serious threat to the health and life of

the Chinese people, and will soon become a heavy burden on socioeconomic development in China. Smoking is an unhealthy social behaviour. After long-term research and experience, we now realize that standard persuasion methods are not effective in controlling smoking or helping people quit. In order to make progress, multiple approaches, including national laws and economic measures, are needed to foster a favorable social environment for tobacco control.

The implementation guidelines of Article 11 of the World Health Organization Framework Convention on Tobacco Control (WHO FCTC) require strengthening of the health warnings on cigarette packages and provide very concrete requirements for cigarette packages. The experience of many countries shows that health warnings on packages of tobacco products – especially eye-catching graphic warnings – are one of the most effective ways to warn people about the harmful effects of tobacco use on health and to encourage smokers to quit. This may be even more important in China, where there is a tradition of people presenting cigarettes to one another and giving cigarettes as gifts. Therefore, educating people about the harm of tobacco through graphic warnings on cigarette packages would be the most direct and effective way to reduce tobacco use. The FCTC came into force in China in January 2006. How effective has China been in implementing the FCTC? In particular, has there been any progress on health warnings on cigarette packages? To answer these questions, the authors of this report conducted an objective and systematic assessment. The results show that health warnings on cigarette packages in China continue to fall far short of FCTC requirements and lag behind those warnings in countries where the FCTC has been strongly implemented. As a result, China's health warnings hardly are playing any role in informing the public. The report findings indicate that the text warnings that China began to place on cigarette packages in October 2008 were not very noticeable, were not effective in increasing behaviours associated with quitting and did not increase motivation to quit. The 2010 Global Adult Tobacco Survey (GATS), conducted in China by the Chinese Center for Disease Control and Prevention, similarly indicated that health warnings on Chinese cigarette packages do not play a sufficient warning and education role. Tobacco use jeopardizes health, and the economic gains from tobacco production and use can never compensate for the health loss. Tobacco control is a venture that calls for hard work now in order to achieve lasting benefits in the future. Just recently, the Central Committee of the Communist Party of China and the State Council jointly issued a proclamation requiring government officials to take the lead by not smoking in public. At present, our mission to control tobacco has not been fulfilled. But the official proclamation represents a new and dramatic shift in approach that, together with hard work and increasing public awareness, holds promise for moving us away from our present tobacco crisis and towards a bright future for tobacco control in China.

I would like to thank everyone who contributed to this project.



# MESSAGE FROM DIRECTOR, THINKTANK RESEARCH CENTER FOR HEALTH DEVELOPMENT

China is facing a growing public health crisis as the prevalence of tobacco use in the country continues to be extremely high. More than 3000 people die every day in China from smoking-related illnesses, translating into over 1 million deaths per year. It is expected that the death toll will double to 2 million per year by 2020 if current trends continue, and by the year 2030, one third of all male deaths will be from smoking-related diseases.



The Chinese Government signed the WHO Framework Convention on Tobacco Control (WHO FCTC) in 2003 and ratified the treaty in 2005. Since that time, China has made some progress in tobacco control; however, in many areas policies have fallen short of meeting the minimum requirements of the WHO FCTC. According to Article 11 of the WHO FCTC, China is required to implement large, visible, rotating warnings covering 50% or more of the principal display areas of tobacco packs.

Health warnings are a low-cost, highly effective means of educating smokers and non-smokers, including adolescents and young people, on the harms of tobacco and exposure to tobacco smoke. This report serves as a call to action for our country as China has fallen short of meeting the WHO FCTC requirements for text warnings. China, which is among the association of five countries that make up BRICS (Brazil, the Russian Federation, India, China, and South Africa), also has fallen behind the first three members of the group that have already implemented pictorial warnings.

This report provides compelling evidence based on studies conducted in more than 20 countries by the International Tobacco Control Policy Evaluation Project (the ITC Project) that the implementation of pictorial warnings can make a strong contribution to achieving the aims of the China National Tobacco Control Plan, by increasing public awareness of the harms of tobacco and encouraging smokers to quit.

Over the past two years, the ThinkTank Research Center for Health Development has mobilized an extensive advocacy and outreach campaign across numerous cities in China in collaboration with the Chinese Center for Disease Control and Prevention (CDC), local health sectors, universities and nongovernmental organizations to pressure policy-makers, inform the public and engage the media on the need for pictorial warnings on cigarette packages. We are strongly committed to our activities to increase knowledge of the harms of tobacco, including through our warning label campaign, "I want to tell you because I love you".

Our research has shown that pictorial warnings increase awareness of smoking-related diseases and of the health impacts caused by second-hand smoke. Our research has shown that the public supports pictorial warning labels. In 2011, 1525 people signed a letter to the Minister of Industry and Information Technology to call for the introduction of pictorial warning labels on cigarette packages. ITC data shows that after the warning labels were placed on the front and back of the pack (in English) in 2008 and two new health messages were introduced, 40% of male smokers still wanted more health information on cigarette packages. However, health warning messages have not been updated since 2008.

I strongly support this report's recommendation that China implement pictorial warnings on at least 50% of the top of the front and back of the pack to honour its commitment to the WHO FCTC, to achieve the goals of the China National Tobacco Control Plan, and to protect public health in our country.

Wangleton

Director, ThinkTank Research Center for Health Development, Beijing, China



# MESSAGE FROM PRINCIPAL INVESTIGATOR, ITC PROJECT

Nowhere on the planet does the tobacco epidemic loom more ominously than in China, where there are 300 million smokers and where findings from the International Tobacco Control (ITC) China Project over the past five years have documented the very low levels of knowledge about the specific harms of cigarettes, relative to other ITC countries throughout the world.

The road map for reducing tobacco use is clearly described by the WHO Framework Convention on Tobacco Control (WHO FCTC), the world's first health treaty. Among the key objectives of the treaty, which China ratified in 2005, is to inform consumers about the enormous health harms of cigarettes and other tobacco products – part of WHO's MPOWER package of FCTC policies, under the W (for "Warn"). The FCTC Article 11 Guidelines provide a clear description of the ingredients for strong and effective warnings: that they should occupy at least 50% of the front and back of the pack, that they should describe specific harms (e.g., lung cancer, heart disease, stroke, emphysema) that are known to be caused by cigarette smoking, and that they should include pictorial images of the harms of tobacco products in order to increase the salience of the warnings and to emotionally engage consumers.

Research studies over the past decade – including those from the ITC Project across many countries – have concluded that such pictorial warnings significantly increase effectiveness by increasing knowledge, awareness and perceptions of the risk of cigarettes, and that this leads to greater motivation and movement towards quitting among smokers and lowered motivation to start smoking among non-smokers. A recent ITC Project study has shown that the introduction of pictorial warnings in Canada led to a significant decline in smoking rates.

All of the research evidence demonstrating the power of pictorial warnings has so far not been incorporated into health warnings in China. And as a result, it is not surprising that the findings presented in this report show that the current text-only Chinese health warnings are very ineffective – at the bottom or close to the bottom of all 20 ITC countries on all indicators of warning effectiveness.

We hope that the evidence presented in this report will help lead China to finally engage in designing and implementing stronger health warnings. Since the beginning of the ITC Project in 2002, we have noted many times that research evidence can give policy-makers the courage to do what's right. In China today, as the tobacco epidemic continues unabated, there has never been such an urgent need for that kind of courage.

Dr Geoffrey T. Fong, PhD

Geoffrey T. Jong

Professor of Psychology and Public Health and Health Systems, University of Waterloo

Senior Investigator, Ontario Institute for Cancer Research

Prevention Scientist, Canadian Cancer Society Research Institute

Principal Investigator, International Tobacco Control Policy Evaluation Project (ITC Project)

## **EXECUTIVE SUMMARY**

Tobacco use in China is taking an alarming toll on public health, killing more than 1 million people every year. China's National Tobacco Control Plan has established aggressive targets to achieve a relative reduction in smoking prevalence of over 10% among adults and over 25% among youth in just three years, as well as to increase public awareness of smoking-related health risks. Most smokers in China are not aware of the harms caused by tobacco use, and large pictorial warning labels have been proven to increase smokers' awareness of health risks and increase the likelihood that smokers will think about quitting and reduce their tobacco consumption. This report summarizes evidence on the effectiveness of China's text health warnings. It presents the results of three waves of survey data collected by the International Tobacco Control Policy Evaluation Project (the ITC Project) in China in the context of research conducted in other ITC countries that have implemented large pictorial health warnings and thus have met their obligations under Article 11 of the WHO Framework Convention on Tobacco Control (WHO FCTC). The report urges policy-makers to accelerate the implementation of pictorial health warnings as one of the most cost-effective interventions to achieve the smoking prevalence reduction and public education targets set out in the National Tobacco Control Plan.

The WHO FCTC provides a road map for the implementation of tobacco control policies to reduce the prevalence of tobacco use. China signed the WHO FCTC in 2003 and ratified it in 2005, and therefore has committed to implementing effective measures to reduce tobacco use. Article 11 of the WHO FCTC requires Parties to implement large, visible, rotating warnings covering at least 50% of the principal display areas in the country's principal language within three years of ratification. The treaty states that the warnings "may include pictures"; however Guidelines for the Implementation of Article 11 adopted in November 2008 at the Third Conference of the Parties to the WHO FCTC recommend that warnings include full-colour pictures covering more than 50% of the principal display areas.

While China has taken some initial steps to strengthen its text-only health warnings, the current warnings fall short of meeting the Article 11 requirements and best practice recommendations of the Article 11 Guidelines:

- There is no meaningful rotation. All packs have the same warning labels consisting of two different messages on the front and back of the pack.
- Warnings are not large, clear, visible and legible. Warnings only cover the minimum required 30% of the front and back of the pack. The background colour of the warnings is the same as the colour or pattern of the package, so the warning is not graphically distinct from the package design. In addition, the font is small.
- **Warnings are not in the form of pictures.** Warnings are text-only.
- Warnings are not at the top of the package.
- Warnings do not include a range of distinct warnings and messages. Only three messages are provided. No information is provided about tobacco and specific diseases, the addictive nature of tobacco or the harms of second-hand smoke.
- Warnings do not provide advice about cessation.

5

The ITC China Wave 3 (2009) Survey of 5583 smokers and 1417 non-smokers in seven cities provides evidence of substantial gaps in smokers' knowledge of important smoking-related health effects.

- Almost three quarters of smokers do not know that smoking causes stroke.
- Almost half do not know that smoking causes coronary heart disease.

The ITC China Wave 2 (2007–2008) and Wave 3 (2009) evaluation of the effectiveness of health warnings before and after China implemented text warnings on 30% of the front (in Chinese) and back (in English) in October 2008 indicates that the changes resulted only in small improvements in warning label effectiveness. In April 2012, the font size of the warning was increased, but the overall label size remained at 30% of the front and back of the pack and the English text warning on the back of the pack was replaced with the Chinese text. The ITC China Project is in the process of evaluating the impact of the April 2012 changes. In comparison, in January 2009, Malaysia implemented pictorial warnings on 40% of the front and 60% of the back of the pack in line with Article 11 Guidelines. Changes in "noticing the health warnings" and the extent to which labels made smokers "think about quitting" and "give up a cigarette at least once" before and after the warning label revisions show the enormous potential of large pictorial warnings. After the implementation of pictorial warnings:

- The percentage of male smokers who "often" or "very often" noticed warning labels increased from 51% to 66% in Malaysia vs. 42% to 47% in China. The percentage of male smokers who "often" or "very often" noticed warning labels increased from 51% to 66% in Malaysia vs. 42% to 47% in China.
- The percentage of male smokers who said labels made them think about quitting smoking "a lot" increased from 6% to 20% in Malaysia vs. 3% to 5% in China.
- The percentage of male smokers who gave up a cigarette at least once in the last month due to the warning labels increased from 23% to 56% in Malaysia vs. 15% to 20% in China.

Similar evaluation studies conducted in ITC countries where large pictorial warnings were implemented (for example, Australia, Brazil, Mauritius, Thailand and Uruguay) confirm the benefits of switching from text-only to pictorial health warnings.

The adoption of pictorial warnings also provides an opportunity to change social norms around the Chinese tradition of gifting cigarettes — a practice which has been shown to contribute to smoking initiation and failure to quit. The inclusion of pictorial health warnings on tobacco products could work synergistically with mass media campaigns to educate the public on the negative health impact of cigarettes and help to reduce the practice of cigarette gifting.

ITC data show that smokers in China support having more information on health warnings. After the implementation of the larger text warnings in 2008, 40% of smokers still wanted more information. ITC experimental studies have shown that Chinese smokers rate pictorial health warnings as much more effective than the same warnings without graphic images.

Over 60 countries that are Parties to the WHO FCTC, including three of the BRICS countries (Brazil, Russian Federation and India) have already implemented pictorial warnings. A fourth BRICS country - South Africa, is working towards finalizing a set of regulations for pictorial warnings. Hong Kong (China) and Macao (China) have both implemented pictorial warnings on 50% of both sides of the pack.

## **SUMMARY OF FINDINGS**

- While China has taken steps to improve health warning labels, evidence from the ITC China Project has shown that the 2008 text-only health warnings are not significantly more effective than previous warnings.
- ITC experimental studies have shown that Chinese smokers rate pictorial warnings as much more effective than the same warnings without graphic images.
- Evidence from the ITC Project in numerous countries has demonstrated that pictorial warnings increase knowledge of the harms of smoking among smokers and non-smokers, increase behaviours associated with quitting and help smokers refrain from restarting once they quit.
- Evidence from the ITC Project suggests that revising the health warnings in line with the WHO FCTC Article 11 Guidelines would increase knowledge of the harms of cigarettes and the motivation to quit among smokers in China.

## RECOMMENDATIONS FOR ACTION

- Implement pictorial warnings on at least 50% of the top of the front and the back of cigarette packages in line with the WHO FCTC Article 11 Guidelines. This would not only significantly increase the impact of health warnings in China, but also help contribute to the achievement of the goals articulated in the China National Tobacco Control Plan.
- Pictorial health warnings should provide messages to motivate quit attempts, including display of a quitline number.
- Over 60 countries that are Parties to the WHO FCTC, including three of the four other BRICS countries have already implemented pictorial warnings. Therefore, there are many examples of warnings that could be used to guide the design of more effective health warnings in China.\*

<sup>\*</sup>The WHO Tobacco Free Initiative (TFI) launched a Health Warnings Database website (www.who.int/tobacco/healthwarningsdatabase/en/index.html) designed to facilitate the sharing of pictorial warnings and messages among countries and Parties. The website was developed following a decision by the Conference of the Parties to the WHO FCTC at its third session and will continue to be updated on a regular basis as countries and Parties provide these images.

# INTRODUCTION

On 21 May 2003, the World Health Organization (WHO) adopted the Framework Convention on Tobacco Control (WHO FCTC), the world's first health treaty. As of December 2013, 177 countries, covering 88% of the world's population, are Parties to the treaty.

Packaging and labelling requirements, including health warnings on tobacco products, are the focus of Article 11 of the WHO FCTC.(1) Within three years of ratification, Article 11 requires Parties to implement effective measures designed to ensure that: a) packaging and labelling of tobacco products do not create false or misleading impressions about its characteristics, health effects, hazards or emissions or that a particular product is less harmful than another tobacco product; and b) each pack carries health warnings describing the harms of tobacco use.

Warning labels on tobacco products, in particular pictorial or graphic warning labels, are one of the most effective policies for warning about the dangers of tobacco use and encouraging smokers to quit.

#### Article 11 requires that health warnings on tobacco products:

- shall be rotating, large, clear, visible, and legible
- should cover at least 50% of the principal display areas (but no less than 30%)
- may include pictures
- shall be in the country's principal language.

To assist Parties in meeting their obligations under Article 11, the Third Conference of the Parties (COP) to the WHO FCTC adopted Guidelines for Implementation of Article 11 in November 2008.(2) According to the Article 11 Guidelines, Parties to the WHO FCTC in an effort to increase the effectiveness of their packaging measures, should consider warnings on tobacco products that:

- are at the top of the front and back of each package;
- cover more than 50% of the principal display areas, and are as large as possible;
- provide health warning text and messages in bold print using an easily legible font size to enhance visibility;
- include full-colour pictures;
- include two or more sets of rotating warnings with a range of messages;
- elicit unfavourable emotions and personalize the warning and messages; and
- provide advice on cessation and sources for cessation help.

China signed the WHO FCTC in 2003 and ratified it in August 2005. The WHO FCTC came into force in China in January 2006. In becoming a Party to the WHO FCTC, China committed to implementing the obligations contained in the WHO FCTC, including those described in Article 11 with respect to tobacco labelling. In the five years since the Article 11 Guidelines were adopted—during which time nearly 60 WHO FCTC Parties have either implemented or have made legislative commitments to warnings that meet or exceed the Article 11 Guidelines—research evidence has accumulated showing conclusively that health warnings could be made much more effective if they follow the recommendations of the Article 11 Guidelines. China has not yet taken those evidence-based steps in their labelling policies. As of December 2013, health warnings on tobacco packages in China remain very weak.



Children exposed to cigarettes at point of sale, Shanghai, China

Photo credit: Chinese Center for Disease Control and Prevention

This report is designed to present policy-makers in China with the necessary evidence to implement more effective health warning labels for tobacco products. The report will summarize the current state of warning labels in China, recent steps towards strengthening warning labels and the international evidence on the effectiveness of pictorial health warnings.

In addition, findings from the International Tobacco Control Policy Evaluation Project in China (the ITC China Project), highlighted in this report, demonstrate the low effectiveness of the current text warnings. Evidence from the ITC Project about the potential for increasing the impact of warning labels with the implementation of pictorial warnings is also included in this report. This information will be presented in context of the WHO FCTC requirements and China's own goals on tobacco control and health promotion, as outlined in the China National Tobacco Control Plan, released in December 2012.

The evidence presented in this report is primarily based on findings from the International Tobacco Control Policy Evaluation Project (the ITC Project), the first-ever international cohort study to evaluate the psychosocial and behavioural effects of tobacco control policies and the only research project in the world that focuses on measuring the impact of key policies of the WHO FCTC. The ITC Project conducts surveys of smokers and non-smokers in China and 21 other countries. Three waves of ITC China Survey data have been collected between 2006 and 2009 from 5600 adult smokers and 1400 non-smokers in seven cities in China. Findings from the ITC China Survey and other ITC countries, and from other international warning label studies, are presented here to provide policy-makers with a clear set of evidence-based recommendations to address the urgent need for large pictorial health warnings on tobacco products in China.

# **PICTORIAL HEALTH WARNINGS**

### China's National Tobacco Control Plan

In December 2012, China launched the National Tobacco Control Plan, which calls for the Government to strengthen tobacco control methods and to curb tobacco use. The plan recognizes the challenges that China faces in increasing its efforts in tobacco control, including the high number of adult male smokers (53% of men smoke), the approximately 15 million young people between ages 13 to 18 years who smoke (around 12% of people in this age group), and the very high levels of involuntary exposure to second-hand smoke (72.4% of non-smokers, or around 740 million people, are routinely exposed to second-hand smoke in homes, public places and workplaces). The National Tobacco Control Plan highlights the considerable toll tobacco use takes on the health of the Chinese population: approximately 1 million people die every year in China from tobacco-related illness. This figure is projected to increase to more than 3 million by 2050 if current smoking rates remain unchanged.

The National Tobacco Control Plan establishes two primary goals. The first is to reduce smoking prevalence among adults (from 28.1% to 25% by 2015, a relative reduction of over 10%) and among youth (from 11.5% to below 8.5% by 2015, a relative reduction of over 25%) — in just three years. These goals to reduce smoking rates will require very strong efforts across multiple domains of tobacco control to increase motivation for quitting, which among Chinese smokers is currently very low.

The second primary goal of the National Tobacco Control plan is to increase public awareness of the health risks associated with smoking. Towards this goal, the plan recognizes the need to strengthen cigarette package labelling and health warnings. However, the plan provides neither a timeline for strengthening health warnings nor any specific commitment to pictorial warning labels.

Yet according to the guidelines to Article 11 of the WHO FCTC,

"Evidence shows that health warnings and messages that contain both pictures and text are far more effective than those that are text-only."

As this report will show, the implementation of strong pictorial warnings on tobacco products in China as recommended by Article 11 Guidelines of the WHO FCTC would make a significant contribution towards achieving both primary goals of the National Tobacco Control Plan.

## Health warnings as a communications tool

Health warning labels are, therefore, a key component of communication strategies to educate smokers and nonsmokers about the harms of tobacco use. Strengthening warning labels is thus particularly important in China, where knowledge and awareness of tobacco harm remains low, as discussed later in this report.

In China, several national-level anti-smoking campaigns, as well as smaller-scale, localized campaigns, have sought to increase awareness among Chinese citizens about the harmful effects of tobacco smoking and exposure to second-hand smoke. When evaluated by WHO on eight basic mass media campaign criteria including target audience research, pre-testing campaign materials, use of a thorough planning process for purchasing air time, evaluation of campaign implementation, and outcomes and the use of news media outlets for publicity, China is one of the countries with the highest level of achievement in terms of the use of a comprehensive communication approach. (3) Localized campaigns such as the World Lung Foundation's "Sponge" campaign, which was launched in Beijing in January 2009, and the "Giving cigarettes is giving harm" campaign, which ran in 11 cities in December 2008 to February 2009 and May 2010, are examples of recent, smaller-scale education efforts.(4)

Targeted advertising is one very effective means of communicating the health harms of smoking. However, even the best mass media advertising campaigns do not reach all smokers all of the time. In contrast, health warning labels have tremendous reach and frequency of exposure. Accordingly, strong health warnings on tobacco packages are the most important source of information for smokers about the harms of smoking and of tobacco smoke pollution (or second-hand smoke). This is because, first, the frequency of exposure to tobacco package health warnings is potentially very great: the average smoker in China smokes 15–17 cigarettes per day, which means that the average smoker is exposed to a health warning up to 6205 times in one year, just through the act of getting each cigarette from the pack. Moreover, the exposure to the health warnings occurs at the most opportune time for potentially changing behaviour, because it comes at the exact time the smoker is preparing to smoke the cigarette.

Because of their reach, health warnings are an extremely cost-effective public health intervention when compared to other communication tools such as paid mass media advertising. Indeed, studies have shown that even in countries where mass media campaigns are common (Australia, Canada, the United Kingdom of Great Britain and Northern Ireland, and the United States of America), smokers report that they receive more health information about the negative effects of smoking from warning labels than from any other source except television. (5) Smokers in the ITC China Survey reported that the most frequently noticed sources of information on the dangers of smoking are the cigarette packs themselves (79%), followed by television (70%) and anti-smoking information in public transportation stations and vehicles (61%).(5) Non-smokers also report high exposure and awareness of health warning labels, as tobacco packages are displayed each time the product is used or left in public view and are also prominent in retail outlets in many countries.(6)

## Impact of health warnings on smoking rates

With respect to the China National Tobacco Control Plan's aim to achieve a relative reduction in smoking rates of 10% by 2015, this report will show that pictorial warning labels significantly boost quit-related behaviours in smokers while decreasing relapse among quitters, and thus can contribute to reducing overall smoking rates.

Evidence continues to show that large pictorial warning labels on tobacco packs increase the motivation of smokers to quit. They increase knowledge on the health effects of smoking, and in turn cause smokers to think more about those health risks. Pictorial warning labels increase anti-smoking behaviours in smokers that can motivate quitting, including the avoidance of warnings (that is, purposely looking away from the warning) and also increase reports from smokers of forgoing a cigarette because of the warning. (7)

### Pictorial warnings decrease smoking rates

A 2013 study conducted by ITC Project investigators compared smoking rates in Canada for a nine-year period before and a nine-year period after the implementation of pictorial warnings in 2001 with smoking rates in the United States over the same two nine-year periods, taking into account the price of cigarettes in both countries. The study provides strong evidence that pictorial warnings are effective in decreasing overall smoking rates. (8) The findings show that the Round 1 pictorial warnings that were introduced in Canada in 2001 led to a decrease of between 12% and 20% in smoking rates. The researchers used the Canadian results to estimate the impact that pictorial warnings could have in the United States; they concluded that if pictorial warnings were introduced in the United States, they could cause between 5.3 million and 8.6 million people to stop smoking. Although it is not clear exactly how the effects of pictorial health warnings found in Canada might apply to China, the ITC Project's evaluation of pictorial health warnings across several countries suggest that, if anything, the impact of pictorial health warnings in low- and middle-income countries (LMICs) such as China could be even stronger than in high-income countries because of the lower levels of knowledge in LMICs.

ITC studies have also shown that ex-smokers benefit from health warning labels. (9) The risk of relapse among ex-smokers increases when they are exposed to other people smoking. It is during these moments of "relapse risk" that pack warnings can encourage continued abstinence from smoking. Pictorial warning labels as described in the Article 11 Guidelines therefore not only to help smokers to quit, but also reduce relapse rates among ex-smokers. In this context, it is important to note that the size, novelty and the use of graphic instead of text-only warnings increase the likelihood of the warnings being seen (and thus to their effectiveness in encouraging smokers to quit and preventing ex-smokers from starting up again).

## Recent changes to health warnings in China

In the last few years, China has taken some initial steps towards strengthening existing tobacco warning labels. However, the existing warning labels require considerable further strengthening to increase their effectiveness in line with the guidelines to Article 11 of the WHO FCTC.

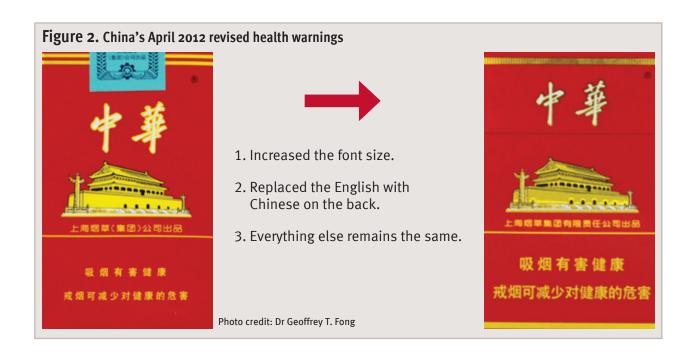
Prior to October 2008, health warning labels in China were located on the side of the pack, rather than on the main front and back display areas of the pack and with only one message: "Smoking is harmful to your health". In October 2008, China took steps to improve the effectiveness of its health warning labels, both by changing the location on the pack as well as the content of the message: the warnings were placed on main display areas, covering 30% of the front and 30% of the back (at the bottom), and two new messages — "Quit smoking reduces health risk" and "Quit smoking early is good for your health" — were introduced, in addition to the existing "Smoking is harmful to your health" (see Fig. 1).

From October 2008 to March 2012, the warning message on the back of the pack was identical to the front, except that it was written in a foreign language, English. In April 2012, China began requiring that the warning label text for all cigarette packs produced domestically be twice the size of the 2008 iteration of the warnings, and that the English-language warning on the back of the pack be changed to Chinese, in line with the WHO FCTC requirement that warnings be in the country's principal language. However, the overall size of the label has remained unchanged at 30% of the front and back of the pack.



The printed warnings are the same colour as the brand label itself, sharing the same colour scheme and font (see Fig. 2). However, Article 11 requires warnings to be "clear and visible", and the Article 11 Guidelines suggest countries consider introducing contrasting colours and easily legible font size to help achieve this.

The China National Tobacco Control Plan outlines several priorities for strengthening cigarette package health warnings: 1) strengthen cigarette package labelling management while prosecuting those that violate cigarette package labelling regulations; 2) improve the content and form of the health warnings on the harms of tobacco, including the period of rotation of health warning labels; and 3) enhance the tobacco harm warning impact in order to meet Article 11 requirements, including improvements such as the enlargement of the warning's size and font and increasing colour contrast. However, in order to maximize the impact of package warnings both in communicating the harms of tobacco and encouraging existing users to quit, the available evidence strongly suggests that pack labels should also include pictorial warnings.



## **Current health warnings in China**

# They need strengthening to meet the requirements of WHO FCTC Article 11 and increase their effectiveness

As illustrated in Table 1, despite the 2012 changes, China's warning labels require further strengthening to meet the obligations for warning labels and messages included in Article 11 of the WHO FCTC and to increase their effectiveness in line with the guidelines to Article 11. As noted above, strengthening warning labels would also help to meet the China National Tobacco Control Plan's goals of improving public awareness about smoking and reducing overall smoking rates.

**Table 1.** Summary of China's current health warnings with respect to WHO FCTC Article 11 requirements and Article 11 Guidelines

Are China's current warnings (April 2012) meeting the requirements of WHO FCTC Article 11 and in line with the **Article 11 Guidelines?** YES NO WHO FCTC Article 11 Requirements Shall be rotating. X There is no meaningful rotation: the two different messages are on the front and back of all packs so all packs have the same warning labels. Shall be large, clear, visible, X Current policy allows the background colour and legible. of the warning message to be the same as the existing colour or pattern of the packaging, so the warning is not graphically distinct from the package design. In addition, font size is small. Should be 50% or more of the ✓ Meets minimum principal display areas but no requirement of less than 30%. 30%. May be in the form of or include X Warnings are text-only. pictures or pictograms. ✓ Warnings on Shall require warnings and other textual information in its principal front and back language. of pack are in Chinese (as of April 2012). Article 11 Guidelines for maximizing effectiveness of warning labels Should appear on both front ✓ Warnings are on and back of pack. both front and back of pack. Should be at the top of the pack X Warnings are at the bottom of the pack. Should be as large as possible X While the warnings meet the minimum (at least 50%). requirement of 30% included in the WHO FCTC. the Article 11 Guidelines recommend Parties consider using warnings that cover as much of the principal display area as possible, given the evidence that effectiveness increases with size. Should include full-colour pictures. X Warnings are text-only. Should include a range of warnings X Warnings only include three messages "Smoking is harmful to your health", "Quit and messages. smoking reduces health risk" and "Quit smoking early is good for your health". No information is provided about the relationship between tobacco and specific diseases such as cancer, heart disease etc., the addictive nature of tobacco smoking or the harms of exposure to second-hand smoke. Should provide advice X Warnings do not include information about

about cessation.

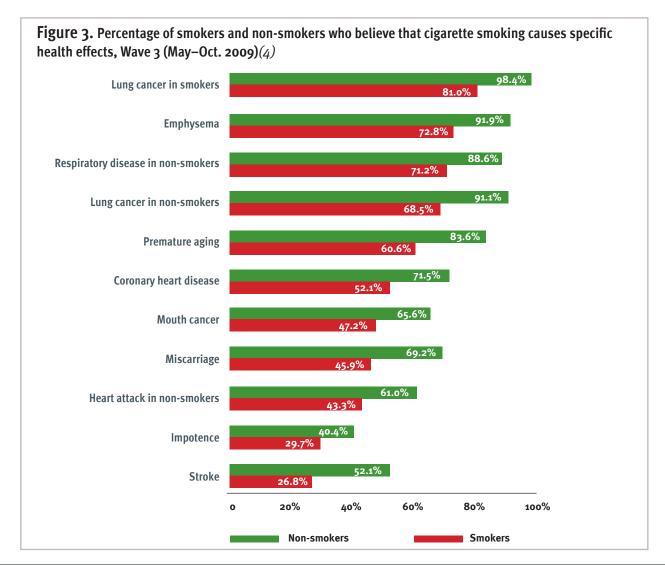
where or how to get cessation assistance.

# Chinese smokers and awareness of smoking-related harm

As noted above, public awareness and knowledge about the health risks of smoking are currently very poor. Stronger health warnings in China could help to improve current lack of awareness of the true health risks of smoking and exposure to tobacco smoke among Chinese smokers and non-smokers.

For instance, during Wave 3 (2009) of the ITC China Survey, more than half of Chinese smokers correctly believed that smoking causes lung cancer (81%), emphysema (73%), premature aging (61%) and coronary heart disease (52%). However, fewer than half of smokers believed that smoking causes stroke (27%), impotence (30%), miscarriage (46%) and oral cancer (47%) (see Fig. 3).

Other studies have found that the health warning labels in China are not effective in communicating the harms of smoking and encouraging smokers to quit. For example, the 2010 China Global Adult Tobacco Survey (GATS) found that while 90% of male smokers and 60% of female smokers

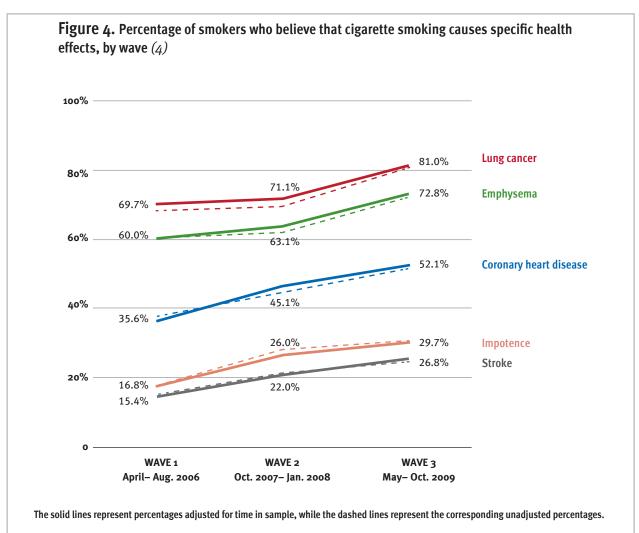


ITC data show that the majority of smokers are not aware that smoking causes stroke, and almost 50% do not believe that smoking causes coronary heart disease – two of the leading causes of death in China.

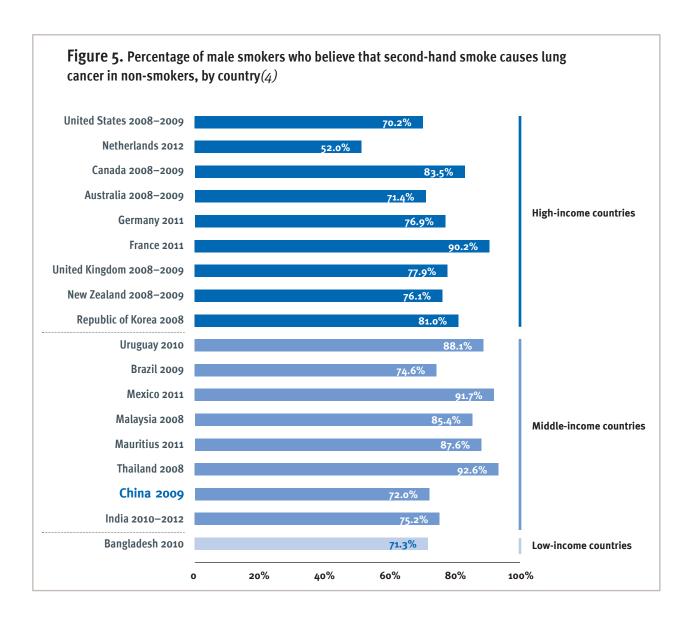
noticed health warning labels in the past 30 days, only 37% of male smokers and 43% of female smokers thought about quitting smoking after having seen the labels. (10) In contrast, in Brazil and Thailand, where more than 90% of smokers have noticed the large pictorial labels on packs (100% on back of pack in Brazil; 50% of front and back in Thailand) in the past 30 days, more than two thirds of smokers (72% male smokers and 77% female smokers in Brazil; 71% of male smokers and 66% of female smokers

in Thailand) thought about quitting. (10) The GATS China also showed that only 23% of respondents were aware that smoking caused stroke, heart disease and lung cancer. (11)

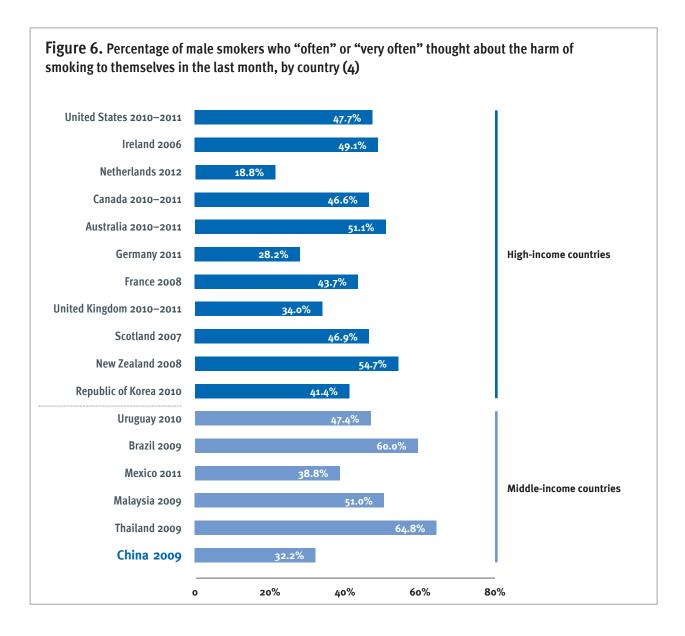
ITC data suggests that knowledge and awareness of the harms of smoking have increased among Chinese smokers and non-smokers since 2006; however, the majority of smokers are not aware that smoking causes stroke and almost 50% do not believe that smoking causes coronary heart disease – two of the leading causes of death in China (see Fig. 4).



Although over two thirds of smokers (69%) believe that smoking causes lung cancer in non-smokers, comparison with 17 other ITC countries shows that male smokers in other countries generally have much higher levels of awareness than those in China (see Fig. 5). Most smokers (71%) and non-smokers (89%) during Wave 3 believed that second-hand smoke causes respiratory diseases in non-smokers. However, only 43% of smokers and 61% of non-smokers believed that second-hand smoke causes heart attacks in non-smokers. (4)



Although Chinese smokers are becoming increasingly aware of the health effects of smoking for smokers in general, they are less likely to think about the harms they are causing to themselves personally. During Wave 3, only 32% of Chinese smokers thought about the harms of smoking to themselves "often" or "very often" in the last month. ITC cross-country comparisons of male smokers show that among 17 countries where data were available, Chinese male smokers "often" or "very often" think about the harm to themselves of smoking less than in many other countries (see Fig. 6). Only 14% of smokers during Wave 3 believed that smoking has damaged their health "very much". This percentage remained relatively unchanged from previous waves (19% during Wave 1 and 15% during Wave 2).



In total, only 7% of respondents in the ITC China Project, both smokers and non-smokers, were aware of *all* of the negative health effects of smoking identified in the ITC China Survey.(13)

The clear message from this data is that there is a strong need to provide more information to the Chinese public about the health risks of smoking, including through strengthening the current health warning labels on tobacco products.

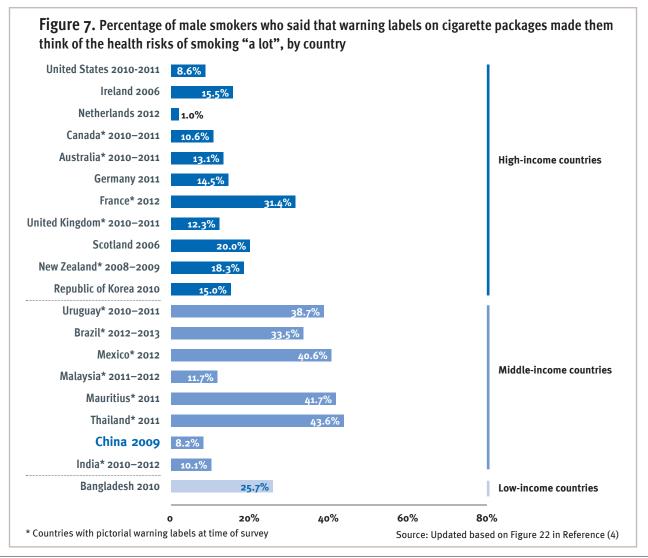
Although Chinese smokers are becoming increasingly aware of the health effects of smoking for smokers in general, they are less likely to think about the harms they are causing to themselves personally.

# **HEALTH WARNINGS IN CHINA**

## How does China compare to the rest of the world?

In total, 177 countries are Parties to the WHO FCTC and as such are obligated by Article 11 to adopt and implement large, clear and rotating health warnings within three years of WHO FCTC ratification.

As of October 2012, over 60 countries have passed legislation requiring pictorial health warnings, though only 47 countries have mandated that the labels cover at least 50% of the principal surface area of the pack to meet the recommendation included in the Article 11 Guidelines. (14) ITC cross-country comparison data (see Fig. 7) suggest that the 2008 Chinese text warnings were ineffective at making smokers think about the health risks of smoking, especially when compared with the impact of health warnings in other ITC countries. Only 8% of male smokers said that warning labels on cigarette packages made them think about the health risks of smoking "a lot". A more detailed evaluation of China's warning labels from the ITC China Survey is provided later in the report.



Of the five countries that make up the BRICS association (Brazil, the Russian Federation, India, China and South Africa), only the first three have implemented pictorial warning labels on their tobacco products. Brazil (in 2001), India (in 2009) and the Russian Federation (2013) have implemented pictorial warnings, leaving only China and South Africa as the remaining BRICS nations that have not yet implemented pictorial warnings. However, South Africa has taken steps towards requiring pictorial warning labels as an amendment to the Tobacco Products Control Act that came into force August 2009 giving the government authority to regulate packaging of cigarettes including warning messages with pictures showing the consequences of tobacco use. The South Africa Ministry of Health is working to finalize regulations that would require pictorial warning labels. (15)

### Other countries and areas

### **BRAZIL**

For well over a decade, Brazil has been a global leader in efforts to reduce tobacco consumption, implementing significant tobacco control policies even before the adoption of the WHO FCTC, and after ratification, implementing some of the world's most graphic pictorial warnings.

In 2001, Brazil passed legislation requiring all cigarette packs to cover 100% of the back of the cigarette pack with government-mandated pictorial health warning labels. Since then, Brazil implemented two new sets of pictorial warnings in 2004 and 2009. These new sets of warning labels remained only on the back of the cigarette pack; however, new warning labels covering an additional 30% of the front of the pack will be required by 2016.

Brazil was the second country in the world and the first country in Latin America to adopt pictorial warnings on cigarette packs. The warnings portray vivid images of human suffering and some of the most emotionally arousing pictorial warning label images in the world. In the process of creating this set of vivid images for their warnings, the Brazilian Government followed the recommendations of researchers from the field of neuropsychology who had conducted studies on the psychology of emotions. Those studies showed that images that are very negative and that are high in arousal cause an avoidance response, (16) and that such highly negative arousing images can create stronger negative associations with tobacco products, thereby having the potential to make tobacco products less positive in the minds of smokers and non-smokers. Two of the highly arousing images were used in the newest pictorial health warnings issued in August 2009.(17)

### **INDIA**

In 2003, the Indian Parliament passed the Cigarettes and Other Tobacco Products Act (COTPA) and as a result began drafting a policy to introduce pictorial health warnings on all tobacco products. Several delays in implementation meant that the first pictorial warnings were not released until 2008 under the COTPA Packaging and Labelling Rules. The end result was a set of warnings that were weaker than those initially proposed. (18) Evaluations of these weaker warnings showed them to be ineffective and poorly understood by the Indian population. (19)

However, since the first set of pictorial health warning labels, India has made strong progress in implementing more effective warnings on tobacco products. In December 2011, an amendment to the COTPA legislation introduced new pictorial warnings to replace the older versions. These new pictorial warnings included four warnings for smoked tobacco products and four warnings for smokeless tobacco products such as snuff and chewing tobacco. The set of health warnings created for smoked tobacco products include images of diseased lungs and mouth cancer, each accompanied by the words "Smoking Kills". The set of health warnings created for smokeless tobacco products include graphic depictions of different forms of mouth/jaw cancer, also accompanied by the words "Tobacco Kills".

Following the second set of pictorial warning labels, the Indian parliament passed legislation introducing a third set of labels, which came into effect on 1 April 2013. The 2013 labels are similar to the 2011 labels in that they include images of diseased lungs and jaw/mouth areas, but the images used are slightly different. The text has also not changed, other than the inclusion of the word "Warning" written in red capital letters (see Fig. 8). The warning labels cover approximately 40% of the front of the package and do not appear on the reverse side. (This means they only cover about 20% of the principal display area and need to be enlarged to meet the WHO FCTC Article 11 requirement of at least 30%.) The health warning must be in English, an Indian language, or both, depending upon the language used on the rest of the pack. Where more than one language is used on the pack, the warning shall appear in two languages, one in which the brand name appears and the other in any other language used on the pack.

Figure 8. Examples of India's pictorial health warnings on smokeless (left) and smoked tobacco products (right)



### **RUSSIAN FEDERATION**

As of May 2013, the Russian Federation has required pictorial warning labels on all cigarette packages. Like Brazil, the Russian Federation is using graphic images depicting the impact of smoking on human health. Visual images range from sick infants to blackened lungs, with accompanying messages including "Self-Destruction", "Periodontitis" and "Erectile Dysfunction" (see Fig. 9).

Figure 9. Examples of the Russian Federation's pictorial health warnings on cigarette packages





There are 12 pictorial warning labels in total. The pictorial label covers 50% of the back of the package, while 30% of the front of the display has in bold text "Tobacco Kills".

The Russian Federation has one of the highest smoking rates in the world, with 39.1% (43.9 million people) of the adult population currently smoking (20) and approximately 330000-400000

smoking-related deaths each year. (21) Prior to the change from text-only to pictorial warnings, 94% of Russian smokers noticed warning labels on cigarette packages, but only 32% indicated that the labels made them think about quitting. (22) Just as China's National Tobacco Control Plan includes the objective of reducing youth smoking rates, in implementing the pictorial warning labels, the Russian Government hopes not only to curb overall smoking rates, but also to prevent youth and other non-smokers from starting to smoke. (23) These aims are consistent with the growing body of international evidence demonstrating that pictorial warning labels can contribute to reductions in smoking prevalence, while at the same time increasing knowledge of the harms of tobacco use.

Brazil, the Russian Federation and India have already implemented pictorial health warnings.

### **SOUTH AFRICA**

Currently, South Africa's text warning labels are not compliant with the minimum size requirements of WHO FCTC Article 11. One of eight primary warnings must cover 15% of the top of the front of the pack and a secondary warning must cover 25% of the top of the back of the pack. Rotation of the labels are required every 12 months.

However, South Africa's Ministry of Health is currently finalizing a set of regulations that would require pictorial warning labels. (14)

### **HONG KONG (CHINA)**

Hong Kong (China) has had pictorial warning labels since October 2007 as part of the Smoking (Public Health) Ordinance of 2006. The ordinance requires that all cigarette packages have warning labels that cover 50% of both sides of the pack and include both Chinese and English warnings. Each year Hong Kong (China) rotates six new pictorial health warnings (see Fig. 10).



### MACAO (CHINA)

Macao (China) introduced pictorial warning labels on 1 January 2013. There is a set of six pictorial labels in Macao (China), which are required on 50% of both sides of the pack (see Fig. 11). The warning label is written in Chinese on the front of the package and in Portuguese on the other side, the two official languages of Macao (China).

Hong Kong (China) and Macao (China) have implemented pictorial health warnings on 50% of both sides of the pack.





Figure 11. Examples of pictorial health warnings on cigarette packages in Macao (China)

### **CANADA**

### Innovative use of emotion and personal testimonials

In 2001, Canada became the first country to require pictorial health warnings on tobacco products. It was also the first to require the warning labels to cover 50% of the front and back of the tobacco package. Canada's second set of warning labels, implemented in September 2011, has taken an innovative approach in that many of the warnings focus on the human suffering caused by tobacco and tobacco-related diseases. Two such labels present photographs of an actual victim of smoking-related lung cancer (Barb Tarbox) in her dying days, one of which is accompanied by her own words shortly before she died: "Look at the power of the cigarette... Remember this face and that smoking killed me". The 2011 warnings consist of 16 rotating health warnings covering 75% of the front and back of the pack, and include health information inside the pack with graphics and information on the benefits of quitting and tips on how to quit.

## AUSTRALIA

### Plain packaging increases the effectiveness of pictorial health warnings

Plain packaging reduces the appeal of tobacco products, increases the effectiveness of tobacco health warnings and reduces the ability of the packaging to mislead people about the health harms of tobacco.

Guidelines for Article 11 and Article 13 of the WHO FCTC both recommend the adoption of plain packaging to eliminate the use of packs as a method of making tobacco products look attractive. Plain packaging removes all logos, colours and other package designs, including novel shapes (e.g., "lipstick cases", which are designed to appeal to women) from the pack design. But rather than being completely plain, pictorial health warnings are still on the packs.

On 1 December 2012, the Government of Australia implemented the world's first law

requiring plain packaging of all tobacco products. Australia's plain packaging law bans all logos, colours and branding on the pack, allowing only the brand name of the tobacco product to appear in a standard font type and size. All other aspects of the package are standardized, including the location of the brand name, the package structure and the colour. The inside of the package and the individual cigarettes are also standardized, with no identifying markings or inserts.

Research indicates that plain packaging reduces the appeal of tobacco products, increases the effectiveness of tobacco health warnings and reduces the ability of the packaging to mislead people about the health harms of tobacco. (24,25) A study assessing the early impacts of plain packaging in Australia provides evidence for reductions in appeal and increases in urgency to quit among adult smokers after the implementation of plain packaging. Compared to smokers smoking from branded packs, smokers who were smoking from the new plain packages were more likely to perceive their tobacco as being lower in quality and tended to be lower in satisfaction, were more likely to think about and prioritize quitting and more likely to support the plain packaging policy. (26) Plain packaging may also be particularly effective in deterring smoking in key populations. For example, an experimental study conducted among 640 Brazilian women aged 16—26 found that plain packages of cigarettes were rated as less appealing, worse tasting and less smooth on the throat than branded packs; removal of the brand variant further decreased the rating of plain packs on these attributes. (27)

Other countries are beginning to follow Australia's lead: both Ireland and New Zealand have announced plans to introduce plain packaging of tobacco products. (28,29)

# **ITC CHINA SURVEY**

## **Effectiveness of China's health warnings**

### **BACKGROUND INFORMATION**

The ITC China Survey began in 2006 as a partnership between researchers from the Office of Tobacco Control at the Chinese Center for Disease Control and Prevention (China CDC) and researchers from the local CDCs in collaboration with an international team of researchers in Canada (University of Waterloo), Australia (The Cancer Council Victoria) and the United States of America (Roswell Park Cancer Institute and the State University of New York at Buffalo).

The ITC China Survey follows a longitudinal cohort design to track any changes in smoking behaviour and to conduct analyses to identify possible factors that may be responsible for these changes in behaviour, including the impact of policies introduced between survey periods. To date four survey waves have been completed. The survey uses face-to-face interviews. Wave 1 was conducted from April to August 2006 and interviewed a cohort of 4732 adult smokers and 1269 adult non-smokers in six cities in China: Beijing, Changsha, Guangzhou, Shanghai, Shenyang and Yinchuan. Wave 2 was conducted from October 2007 to January 2008 with a total of 4843 adult smokers and 1221 adult non-smokers. Wave 3 was conducted from May to October 2009 with a sample comprised of 5583 smokers and 1417 non-

smokers. Kunming replaced Zhengzhou as the seventh city during Wave 3 and data collected from Zhengzhou were excluded from the analyses. Wave 4 was conducted from September 2011 to November 2012. The data are currently being analysed and therefore are not included in this report.

The ITC China Survey is a prospective longitudinal study of smokers and non-smokers in seven cities in China. Face-to-face interviews were conducted to collect data from respondents. Eligible respondents include adult smokers and non-smokers 18 years of age and older.

### ITC SURVEY QUESTIONS ON HEALTH WARNINGS

All ITC surveys are developed using the same conceptual framework and methods, and the survey questions are designed to be identical or functionally equivalent in order to allow strong comparisons across countries. The use of standardized methods and measures across all ITC surveys ensures that the effectiveness of health warnings and other policies can be compared across countries in order to provide guidance on best practices in tobacco control.

ITC surveys include a broad set of questions to assess health warning label effectiveness. These questions generally fall into three categories: salience, behavioural responses and support for health warnings. The survey questions in Table 2 represent ITC's key measures of health warning effectiveness.

 Table 2. ITC survey questions on health warnings

Measure	Survey question	Response options
Noticing labels	In the last month, how often, if at all, have you noticed the warning labels on cigarette packages?	Never, once in a while, often
Read or looked closely	In the last month, how often, if at all, have you read or looked closely at the health warnings on cigarette packages?	Never, once in a while, often
Thinking about health risks	To what extent, if at all, do the warning labels make you think about the health risks of smoking?	Not at all, a little, a lot
More likely to quit	To what extent, if at all, do the warning labels on cigarette packs make you more likely to quit smoking?	Not at all, a little, a lot
Avoiding labels	In the last month, have you made any effort to avoid looking at or thinking about the warning labels?	Yes or No
Gave up a cigarette	In the last month, have the warning labels stopped you from having a cigarette when you were about to smoke one?	Scale of 1–4, from "never" to "many times"
Amount of health information	Do you think that cigarette packages should have more health information than they do now, less information or about the same amount as they do now?	Less, the same, more

The findings of the ITC China Project with respect to the effectiveness of China's warning labels are provided below. It is important to note that the results are based on the 2008 version of the warning labels (text warnings on 30% of the front and 30% of the back of the pack with the text warning on the back in English).

### BEHAVIOURAL IMPACTS OF HEALTH WARNINGS

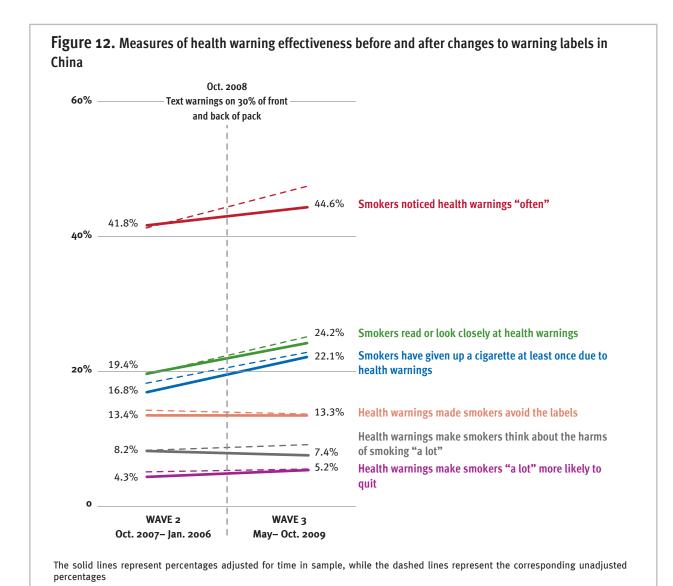
ITC data show that on all measures of warning effectiveness that have been used to evaluate health warnings across the more than 20 ITC countries, current health warnings in China are much less effective they could be in communicating the health harms of tobacco. The 2008 changes have done very little to increase warning effectiveness and comparisons with other countries that have implemented changes to their warnings consistent with the Article 11 Guidelines and demonstrate clearly the widening gap between the text-only warnings still on cigarette packs in China and the enormous potential of large pictorial health warnings.

Prior to the 2008 change in warning labels, respondents in China who indicated that they noticed warning labels either "often" or "very often" was recorded at 42%. As shown in Fig. 15, noticing warning labels was largely unchanged among smokers (45% during Wave 3) after the larger text warnings were introduced. As noted above, for the majority of Chinese smokers, the 2008 text-only warning labels were not effective in making smokers think about the health risks of smoking. During Wave 3, only 7% of all smokers said that the current health warnings made them think about the health risks of smoking "a lot" – cross-country comparison analyses indicate that this percentage is very low compared to most of the other 18 ITC countries where data were available (see Fig. 7 from earlier in the report). There was no change in the percentage of smokers who thought about the health risks "a lot" after the new text warnings were implemented. On the other hand, the percentage who said that the labels made them think about risks "a little" increased from 40% to 49%.

Figure 12 shows that the 2008 text warnings resulted in only small improvements on two measures of warning label effectiveness. During Wave 3, the percentage of smokers who read or looked closely at the warnings increased from 19% to 24%. The percentage of smokers who said that in the last month, labels have stopped them from smoking at least once increased slightly from 17% to 22%. At both Waves 2 and 3, only 13% of smokers reported avoiding labels in the last month.

Furthermore, the 2008 warning labels did not motivate the majority of Chinese smokers to quit. Most smokers (70% during Wave 2 and 59% during Wave 3) stated that the labels do "not at all" make them more likely to quit smoking. The percentage of smokers who stated that warnings made them want to quit smoking "a lot" was 4% during Wave 2 and 5% during Wave 3.

In the Wave 3 China Survey, smokers who had participated in the Wave 2 Survey and had since quit smoking were asked whether the labels would increase the probability that they would continue to refrain from smoking. Almost one third (31%) of those who had quit smoking during Wave 3 responded that the labels would "not at all" increase the probability of continuing to refrain from smoking, while 45% responded they would "a little" and 25% said they would "a lot".

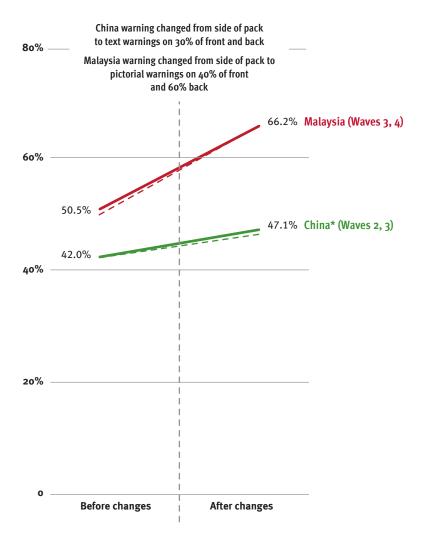


Source: Fong GT, Xiao L, Jiang Y, Li Q, Li L, Yong H. The effectiveness of health warnings in China: Longitudinal findings from the ITC China

Survey. Poster presented at the 10th APACT Meeting. August 19-21, 2013. Makuhari Messe, Chiba, Japan.

By contrast, in January 2009, Malaysia enhanced its warning labels from text to pictorial warnings on 40% of the front and 60% of the back of the pack, and is now in line with the Article 11 Guidelines. In contrast to China, male smokers who noticed warning labels "often" or "very often" increased from 51% to 66% in Malaysia after the implementation of large graphic warnings (see Fig. 13). Similarly, the percentage of male smokers who reported that warning labels made them think about quitting smoking "a lot" increased from 6% to 20% after implementation of pictorial warnings, while the percentage in China essentially stayed the same (see Fig. 14).

Figure 13. Percentage of male smokers who "often" or "very often" noticed warning labels in the last month, before and after warning label changes were introduced in China (Oct. 2008) and Malaysia (Jan. 2009)

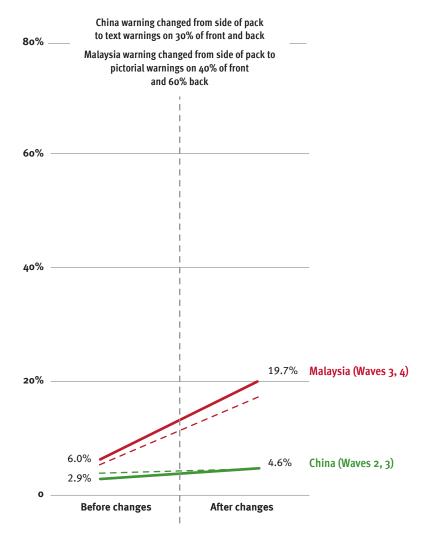


The solid lines represent percentages adjusted for time in sample, while the dashed lines represent the corresponding unadjusted percentages.

Source: Fong GT, Xiao L, Jiang Y, Li Q, Li L, Yong H. The effectiveness of health warnings in China: Longitudinal findings from the ITC China Survey. Poster presented at the 10th APACT Meeting. August 19–21, 2013. Makuhari Messe, Chiba, Japan.

<sup>\*</sup> In China, the response options did not include "very often".

Figure 14. Percentage of male smokers who reported that warning labels made them think about quitting smoking "a lot", before and after warning label changes were introduced in China (Oct. 2008) and Malaysia (Jan. 2009)

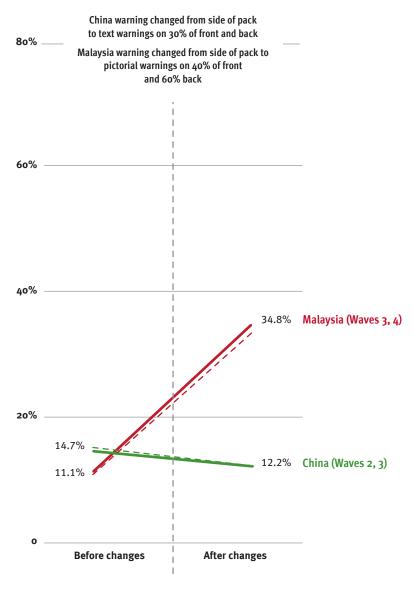


The solid lines represent percentages adjusted for time in sample, while the dashed lines represent the corresponding unadjusted percentages.

Source: Fong GT, Xiao L, Jiang Y, Li Q, Li L, Yong H. The effectiveness of health warnings in China: Longitudinal findings from the ITC China Survey. Poster presented at the 10th APACT Meeting. August 19–21, 2013. Makuhari Messe, Chiba, Japan.

On the measure of avoiding labels in the last month, the percentage of male smokers who reported that they avoided labels increased from 11% to 35% after Malaysia's introduction of pictorial warnings, whereas this percentage decreased in China from 15% to 12% (see Fig. 15). Malaysia's increase in the percentage of male smokers who reported giving up a cigarette at least once in the last month (23% before pictorial warnings to 56% after pictorial warnings) was much higher than in China (15% before the enhanced text warnings to 20% after the text warnings were enlarged) (see Fig. 16). These significant increases across several measures of warning label effectiveness in Malaysia suggest that China could expect a significant improvement in label effectiveness if it were to revise its warnings in accordance with the recommendations included in the Article 11 Guidelines.

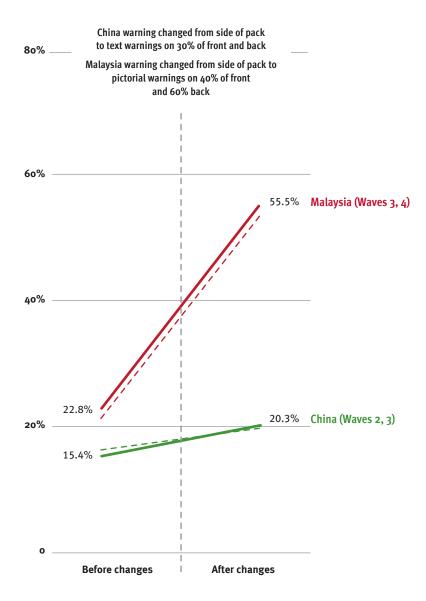
Figure 15. Percentage of male smokers who reported that they avoided the warning labels in the last month, before and after warning label changes were introduced in China (Oct. 2008) and Malaysia (Jan. 2009)



The solid lines represent percentages adjusted for time in sample, while the dashed lines represent the corresponding unadjusted percentages.

Source: Fong GT, Xiao L, Jiang Y, Li Q, Li L, Yong H. The effectiveness of health warnings in China: Longitudinal findings from the ITC China Survey. Poster presented at the 10th APACT Meeting. August 19–21, 2013. Makuhari Messe, Chiba, Japan.

Figure 16. Percentage of male smokers who gave up a cigarette at least once in the last month due to the warning labels, before and after warning label changes were introduced in China (Oct. 2008) and Malaysia (Jan. 2009)



The solid lines represent percentages adjusted for time in sample, while the dashed lines represent the unadjusted percentages.

corresponding

Source: Fong GT, Xiao L, Jiang Y, Li Q, Li L, Yong H. The effectiveness of health warnings in China: Longitudinal findings from the ITC China Survey. Poster presented at the 10th APACT Meeting. August 19–21, 2013. Makuhari Messe, Chiba, Japan.

#### **EMOTIONAL RESPONSES TO HEALTH WARNINGS**

Research evidence suggests that health warnings have the most impact when they are prominent and include emotionally engaging imagery. For this reason, the Article 11 Guidelines encourage countries to consider introducing warning labels that elicit unfavourable emotions.

Several questions were included in the Wave 3 China Survey to measure emotional responses to the health warnings introduced in October 2008. Research evidence suggests that health warnings have the most impact when they are prominent and include emotionally engaging imagery. (30) For this reason, the Article 11 Guidelines encourage countries to consider introducing warning labels that elicit unfavourable emotions.

The Wave 3 China Survey findings indicate that the 2008 text-only warning labels introduced in China do not arouse strong emotional responses. The majority of Chinese smokers (76%) reported that the warning labels caused neither pleasant nor unpleasant feelings. Although 41% reported that the labels made them feel "somewhat alarmed" or "very alarmed", 46% reported feeling "neither alarmed nor calm". In addition, when asked if the warning labels made them worried, 74% responded that they were "not at all worried". In contrast, in Mauritius, where a set of eight pictorial warnings that included graphic images of mouth cancer (see Fig. 17) covering 70% of the back of the pack in English and 60% of the front of the pack in French were implemented in 2009, 72% of smokers reported feeling "somewhat alarmed" or "very alarmed" by the warnings.

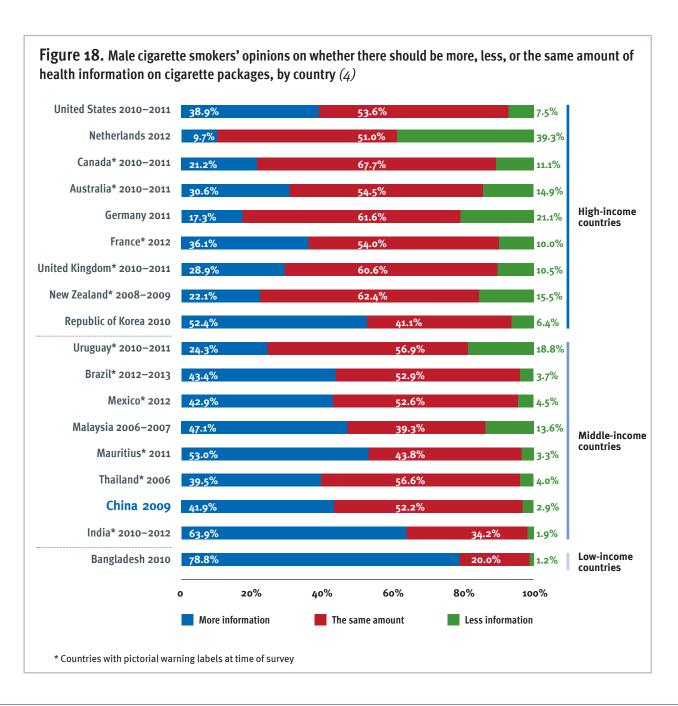
Many smokers in China do not feel that the current health warnings are realistic (that is, credible or believable). Only 10% felt that they were "very realistic" and 45% stated that the warning labels were "somewhat unrealistic" or "very unrealistic". In contrast, in Mauritius the percentage of smokers who think the current warnings are realistic is much higher, with 62% of smokers stating that the new

pictorial warnings were "extremely realistic" or "very realistic". It is notable that the Mauritian warnings were still perceived as realistic despite evoking strong emotional responses such as "alarmed" and "unpleasant" feelings. (31)



#### SUPPORT FOR MORE EFFECTIVE HEALTH WARNINGS IN CHINA

ITC data show that smokers in China support having more information on health warnings. During Wave 2 of the ITC China Survey, more than one third of smokers (40%) wanted more information to be provided on warning labels. During Wave 3, after the implementation of the larger text warnings, 40% of smokers still wanted more information and only 7% wanted less information. ITC cross-country comparisons among male smokers show that the percentage of male smokers in China who want more information on labels is similar to that of middle-income countries that have now adopted pictorial warning labels (see Fig. 18). These statistics point to the powerful role that packs can play as a cost-effective medium for communicating information about the harms of tobacco.



### CHINESE SMOKERS RATE PICTORIAL WARNINGS AS MORE EFFECTIVE THAN TEXT WARNINGS

In 2009, an ITC experimental study conducted with a sample of 1169 adult smokers, adult non-smokers and youth across four cities in China (Beijing, Kunming, Shanghai and Yinchuan) found that the 2008 enhanced text-only Chinese warnings were much less effective than labels that included both pictorial and text warnings. (32) The former (text on the side of the pack) and 2008 enhanced Chinese text-only health warnings (30% on the front and 30% on the back of the pack, but not very distinctive), along with eight alternative health warnings that were created on Chinese packs using pictorial-and-text health warnings adapted from Canada, the European Union, Hong Kong (China) and Singapore, were ranked and rated by respondents on a number of dimensions, including perceived effectiveness in motivating smokers to guit and in convincing youth not to start smoking (see Fig. 19).

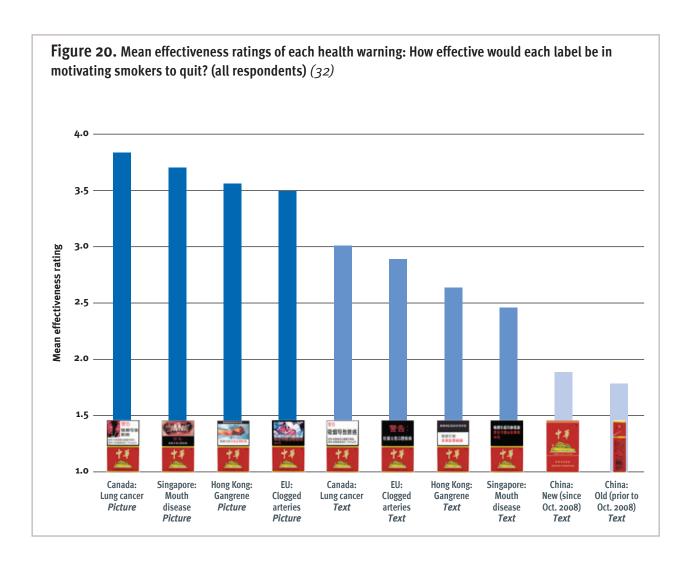
**Figure 19.** Images of health warnings used in the study, including old and new Chinese health warnings (32)

	Canada Lung cancer	Singapore Mouth disease	Hong Kong Gangrene	European Union Clogged arteries	Actual China (Top = old; bottom = new)
Text only	受知号致肺癌 部外的自由型原本性等系 部外的自由型原本性等系 等外的自由型原本性等系 等外的自由型原本性等系 を対象的自由型原本性等系 を対象的自由型原本性等系 を対象的 を対象的 を対象の を対象的 を対象の を対象的 を対象の を対象的 を を を を を を を を を を を を を	警告: 表现导致口腔疾病	香港特区政府が当中区 一般な引致 末何血管疾病	吸缩引起动脉阻塞 并且可放心上负和 中风	CHUNGHWA P
Text + picture	製造 級類导致 新施 35 所用自由自己工作。	######################################	SACRAGE PAR	## 4	## ## ## ## ## ## ## ## ## ## ## ## ##
Text (english)	CIGARETTES CAUSE LUNG CANCER: 85% of lung cancers are caused by smoking. 80% of lung cancer victims die within 3 years.	WARNING: Smoking causes mouth diseases.	Smoking causes peripheral vascular diseases.	Smoking clogs the arteries and causes heart attacks and strokes.	Smoking is harmful to your health. Quitting smoking early is good for your health.

Note: Numbers below each image are the random order numbers assigned to each of the images.

The results were remarkably consistent across male and female adult smokers, adult non-smokers and youth in all four cities. All four pictorial-and-text health warnings were rated and ranked highest on effectiveness in motivating smokers to quit (see Fig. 20) and convincing youth not to start smoking. The text-only versions of the four pictorial warnings were rated in the middle. Finally, the actual 2008 enhanced Chinese text warnings (30% of front and back) were rated at the bottom of the set of 10 warnings, just above the old Chinese text-only warnings that had appeared on the side of the pack.

The use of only English text for the two health warning messages on the back of the pack ("Smoking is harmful to your health" and "Quit smoking early is good for your health") was also shown to be ineffective: close to three-quarters (73%) of adult smokers could not translate "smoking is harmful to your health" and 90% could not translate "quit smoking early is good for your health". (32) The article stated that these findings "support the principle that countries should not be presenting important health messages to their people in a foreign language". China has addressed this shortcoming by replacing the English text warning with Chinese text in its newest 2012 labels.



### **ITC KEY FINDINGS**

## Benefits of switching from text-only to pictorial health warnings

Research studies conducted by the ITC Project provide an evidence base that defines the components of effective health warnings and strongly supports the implementation of large, vivid, pictorial health warnings. Findings from specific countries include:

- The introduction of pictorial warnings in Australia resulted in an increase in noticing and reading of health warnings, thinking about the health risks and quitting, forgoing cigarettes and avoiding the warnings; they also stimulated stronger cognitive responses and more reports of forgoing cigarettes than text-only health warnings in the United Kingdom.
- In Brazil, the aforementioned health warnings containing graphic, emotionally evocative imagery had a greater impact on quit-related cognitions among smokers with lower compared to higher educational attainment. This greater impact of warnings among smokers with lower education was not found in Uruguay, where warnings included abstract representations of risk (that is, a vial with skull and crossbones) or Mexico, which had warnings that contained only text at the time of data collection. Graphic imagery may work better than other types of imagery in addressing tobacco-related disparities associated with education.
- After Thailand introduced pictorial warning labels, the percentage of smokers reporting that the warnings made them think about health risks and made them more likely to quit increased, but no such increase occurred in Malaysia where warnings were text-only over the same time period.
- After Mauritius introduced pictorial warnings in 2009 on 60% of the front and 70% of the back of the
  pack the first nation in the African region to put pictorial warnings on packs smokers were more
  aware of specific harms of smoking, had more thoughts about quitting and had emotional reactions
  that were associated with quitting.

# ADVOCATING FOR PICTORIAL HEALTH WARNINGS IN CHINA

## ThinkTank Research Center for Health Development's health warnings campaign

The ThinkTank Research Center for Health Development has been advocating for the implementation of pictorial warning labels in China through its own innovative campaign entitled "I want to tell you because I love you". ThinkTank launched the campaign in September 2011 using the format of an exhibition of pictorial warning labels created specifically for the campaign. The exhibition has been shown in cities throughout China with the cooperation of the Academy of Medical Sciences and the Office of Tobacco Control, China CDC, and has been enthusiastically received by the public. Since September 2012, ThinkTank has held its campaign in various public places in 180 cities with 2000 exhibitions in total. ThinkTank estimates that more than 2 million visitors have visited its exhibitions since their inception. (33)

To enhance the attractiveness of its campaign, ThinkTank collaborated with celebrities for promotion as well as youth and university students who garnered attention for their use of performance art pieces, runway shows, dramas and poetry. The campaign received significant media coverage, in part due to its creative approach to pictorial warning label promotion. The campaign's activities were broadcast 6600 times on TV and viewed 7400 times on the Internet.(33)

Following the exhibitions, 85% of 11 002 people surveyed were supportive of pictorial warning labels on cigarette packages. In addition, 1525 people have signed a letter to the Minister of Industry and Information Technology calling for the introduction of pictorial warning labels on cigarette packages. (33)

### The practice of gifting cigarettes in China

In addition to improving public awareness about tobacco harms and encouraging smokers to quit, the adoption of pictorial warning labels provides an opportunity to change social norms around the Chinese tradition of gifting cigarettes. Sharing and gifting cigarettes have been shown to contribute to smoking initiation and failure to quit among Chinese males. (34) While the exchange of gifts is a medium for establishing and maintaining interpersonal relationships in Chinese culture, gifting cigarettes normalizes smoking and promotes tobacco's social acceptability.

Cigarettes are popular gifts in China. Estimates derived from the ITC China Survey data suggest that the average smoker receives cigarettes as gifts about once every 10 weeks, that is, about five times a year. (35) Because the price of cigarette brands ranges widely, from US\$ 0.14 (1 RMB) up to US\$ 107 (765 RMB) per pack, recipients can easily determine the monetary value of cigarette gifts and provide suitable reciprocation in the future. The giving and receiving of expensive premium cigarettes display affluence

and status and are often used as a way of facilitating business deals. (36) Even though they have only a small share of the Chinese tobacco market, transnational tobacco companies have strategically priced their products as premium gifts in order to fit into Chinese cigarette gifting customs and they have promoted their products with culturally attractive packaging to compete with local premium brands. (34)

The inclusion of pictorial health warnings on tobacco products would make cigarettes significantly less attractive gifts in China. Pictorial health warnings could therefore help to reduce the practice of cigarette gifting — and the normalization of smoking it helps to reinforce. A study conducted by the China CDC and the World Lung Foundation in 2009 found that after a mass media campaign explaining the negative health effects of giving cigarettes as gifts to family, friends and colleagues, the percentage of people intending to buy cigarettes as gifts decreased in Beijing from 45% to 24% and in Guangzhou from 23% to 12%.(37) Pictorial warning labels could work synergistically with such campaigns, serving as a constant reminder of the negative health impact of cigarettes, thus reducing the social acceptability of gifting cigarettes.

# HEALTH WARNINGS: SUMMARY AND RECOMMENDATIONS

- While China has taken steps to improve health warning labels, evidence from the ITC China Project has shown that the 2008 text-only health warnings are not significantly more effective than the previous warnings.
- ITC experimental studies have shown that Chinese smokers rate pictorial warnings as much more effective than the same warnings without graphic images.
- Evidence from the ITC Project in numerous countries has demonstrated that pictorial warnings increase knowledge of the harms of smoking among smokers and non-smokers, increase behaviours associated with quitting and help smokers refrain from restarting once they quit.
- Implementing pictorial warnings on at least 50% of the top of the front and the back of the pack in line with the WHO FCTC Article 11 Guidelines, would not only significantly increase the impact of health warnings in China, but also help contribute to the achievement of the goals articulated in the China National Tobacco Control Plan.
- Over 60 countries that are Parties to the WHO FCTC, including three of the four other BRICS countries have already implemented pictorial warnings. Therefore, there are many examples of warnings that could be used to guide the design of more effective health warnings in China.\*
- Evidence from the ITC Project suggests that revising the health warnings in line with the WHO FCTC Article 11 Guidelines would increase knowledge of the harms of cigarettes and motivation to quit among smokers in China. Pictorial health warnings should provide messages to motivate quit attempts, including display of a quitline number.
- The implementation of pictorial health warnings must be supported by strict monitoring and enforcement mechanisms to ensure strong compliance. It is essential that these activities are undertaken by institutions that are independent from tobacco industry interests.

<sup>\*</sup> The WHO Tobacco Free Initiative (TFI) launched a Health Warnings Database website (www.who.int/tobacco/healthwarningsdatabase/en/index.html) designed to facilitate the sharing of pictorial warnings and messages among countries and Parties. The website was developed following a decision by the Conference of the Parties to the WHO FCTC at its third session and will continue to be updated on a regular basis as countries and Parties provide these images.

### REFERENCES

- WHO framework convention on tobacco control. Geneva: World Health Organization; 2003. (http://whqlibdoc.who.int/publications/2003/9241591013.pdf).
- Guidelines for implementation of Article 11 of the WHO FCTC adopted at the 3rd session of the conference of parties (decision FCTC.COP3[10]). Geneva: World Health Organization; 2008. (http://www.who.int/fctc/guidelines/article\_11.pdf).
- 3. WHO report on the global tobacco epidemic, 2013: enforcing bans on tobacco advertising, promotion and sponsorship. Geneva: World Health Organization; 2013. (http://apps.who.int/iris/bitstream/10665/85380/1/9789241505871\_eng.pdf).
- ITC China Project report: findings from the wave 1 to 3 surveys (2006–2009). International Tobacco Control (ITC) Project; 2012. (http://itc.media-doc.com/files/ITC-China-NR-English-web-Dec142012-FINAL.pdf).
- Hammond D, Fong GT, McNeill A, Borland R, Cummings KM.
   Effectiveness of cigarette warning labels in informing smokers about the risks of smoking: findings from the International Tobacco Control (ITC) four-country survey. Tob Control. 2009; 14(3), 19–25.
- Fong GT, Hammond D, Hitchman SC. The impact of pictures on the effectiveness of tobacco warnings. Bull World Health Organ. 2009; 87, 640–643. doi:10.2471/BLT.09.069575.
- FCTC article 11 tobacco warning labels: evidence and recommendations from the ITC Project. ITC Project. 2009. (http://roswelltturc.org/ITCwarningreport.pdf).
- Huang J, Chaloupka FJ, Fong GT. Cigarette graphic warning labels and smoking prevalence in Canada: a critical examination and reformulation of the FDA regulatory impact analysis. Tob Control Online First. November 11, 2013 as 10.1136/tobacco control-2013-051170.
- Patros TR, Borland R, Yong H, Thrasher J, Hammond D. Cigarette packet warning labels can prevent relapse: findings from the International Tobacco Control 4-country policy evaluation cohort study. Tob Control. 2009; 22(1), 43–50.
- United States Centers for Disease Control and Prevention.
   Cigarette package health warnings and interest in quitting smoking—14 Countries, 2009–2010. Morbidity and Mortality Report. 2011; 60(20), 645–651.
- 11. Yang Y, Wang J, Wang C-X, Li Q, Yang GH. Awareness of tobacco-related health hazards among adults in China. Biomed Environ Sci. 2010;23(6), 437–444. doi: 10.1016/S0895-3988(11)60004-4.
- Institute of Medicine. Secondhand smoke exposure and cardiovascular effects: making sense of the evidence. Washington, DC: The National Academies Press; 2010.
- 13. Yang J, Hammond D, Driezen P, Fong GT, Jiang Y. Health knowledge and perception of risks among smokers and non-smokers: findings from the wave 1 ITC China survey. Tob Control. 2010; 19(20), 18–23.
- Cigarette package health warnings: international status report. Canadian Cancer Society. October 2012. (http://global. tobaccofreekids.org/files/pdfs/en/WL\_status\_report\_en.pdf).
- Saloojee Y, Ucko P, Drope J. South Africa. In: Drope J (Ed.) Tobacco control in Africa—people, politics and policies. London: Anthem Press; 2011:227–245.

- Nascimento BE, Oliveira L., Vieira AS, Joffily M, Gleiser S., et al. Avoidance of smoking: the impact of warning labels in Brazil. Tob Control. 2008; 17(6), 405–409. doi: 10.1136/tc.2008.025643.
- ITC Brazil report on tobacco advertising, promotion and sponsorship: findings from the wave 1 and 2 surveys (2009– 2013). ITC Project. 2013. (http://www.itcproject.org/files/ ITC\_BrazilNR-ENG-May31-v27.pdf).
- 18. Reddy KS, Arora M, Shrivastav R, Yadav A, Singh D, Bassic A. Implementation of the framework convention on tobacco control (FCTC) in India: A Shadow Report. HRIDAY. 2010. New Delhi, India: Public Health Foundation of India.
- 19. Oswal KC, Raute LJ, Pednekar MS, Gupta PC. Are current tobacco pictorial warnings in India effective? Asian Pac J Cancer Prev. 2011; 12(1), 121–124.
- Global adult tobacco survey: Russian Federation country report, Russian Federation. GATS Russian Federation; 2009 (http://www.who.int/tobacco/surveillance/en\_tfi\_gats\_ russian\_countryreport.pdf).
- 21. Toll of tobacco around the world: Russian Federation.

  Campaign for Tobacco-Free Kids. (http://www.tobaccofreekids.org/facts\_issues/toll\_global/russian\_federation).
- Lunze K, Migliorini L. Tobacco control in the Russian Federation: a policy analysis. BMC Public Health. 2013; 13(64). doi:10.1186/1471-2458-13-64.
- Dobryuha A. Tobacco packs portray impotence and cancer. Komsomolskaya Pravda. May 2012 (http://www.kp.ru/daily/25880/2843964/).
- 24. Moodie C, Stead M, Bauld L, McNeill A, et al. Plain tobacco packaging: a systematic review. Public Health Research Consortium. 2012 (http://phrc.lshtm.ac.uk/project 2011-2016 006.html).
- Plain packaging of tobacco products: a review of the evidence.
   Quit, Cancer Council Victoria. 2011. (http://www.cancervic.org.au/plainfacts/browse.asp?ContainerID=plainfacts-evidence).
- Wakefield MA, Hayes L, Durkin S, Borland R. Introduction effects of the Australian plain packaging policy on adult smokers: a crosssectional study. BMJ Open 2011:3:e003175. doi:10.1136/bmjopen-2013-003175.
- 27. White CM, Hammond D, Thrasher JF, Fong GT. The potential impact of plain packaging of cigarette products among Brazilian young women: an experimental study. BMC Public Health. 2012;12(1):1–10.
- 28. BBC News Europe. Plain cigarette packaging law planned by Irish government. May 28 2013. (http://www.bbc.com/news/world-europe-22690032).
- Plain Packaging. Ministry of Health, Government of New Zealand. February 2013. (http://www.health.govt.nz/ourwork/preventative-health-wellness/tobacco-control/plainpackaging).
- 30. Thrasher JF, Villalobos V, Szklo A, Fong GT, et al. Assessing the impact of cigarette package health warning labels: a crosscountry comparison in Brazil, Uruguay and Mexico. Salud Publica de Mexico. 2010;52(2):206–215.

- 31. ITC Mauritius National Report. Results of the Wave 2 Survey. International Tobacco Control Project. 2011. (http://www.itcproject.org/files/Report\_Publications/National\_Report/itcmauritiusnationalreport\_finalmay2011web.pdf).
- 32. Fong GT, Hammond D, Jiang Y, Li Q, et al. Perceptions of tobacco health warnings in China compared with picture and text-only health warnings from other countries: an experimental study. Tob Control. 2010;19(2):69–77.
- 33. I want to tell you because I love you—the introduction of pictorial warning labels on cigarette packages' campaign. Attachment 2. ThinkTank Research Center for Health Development; 23 June 2013.
- 34. Rich ZC, Xiao S. Tobacco as a Social Currency: Cigarette Gifting and Sharing in China. Nicotine Tob Research. 2012;14(3):258–263.

- 35. Huang L, Thrasher J, Jiang Y, Li Q, Fong GT, Quah ACK. Incidence and correlates of receiving cigarettes as gifts and selecting preferred brand because it was gifted: findings from the ITC China survey. BMC Public Health. 2012;12(996). doi: 10.1186/1471-2458-12-996.
- 36. Chu A, Jiang N, Glantz SA. Transnational tobacco industry promotion of the cigarette gifting custom in China. Tob Control. 2011;20(3). doi: 10.1136/tc.2010.038349.
- 37. Alday J. Survey indicates fewer people in Beijing and Shanghai intended to give cigarettes as gifts after seeing mass media campaign. World Lung Foundation. May 2009. (http://www.worldlungfoundation.org/ht/d/ReleaseDetails/i/6253).

43









