“Global burden and cost-effective interventions for tobacco control"

Dr Douglas Bettcher
Director
Prevention of Noncommunicable Diseases
World Health Organization

Multisectoral Policies for Prevention and Control of Noncommunicable Diseases (NCDs) in the South-East Asia Region, Bengaluru, India, August 2014
BURDEN OF NCDS
GLOBAL AND SEAR
Four types of NCDs are largely preventable by means of effective interventions that tackle shared modifiable risk factors.
Why does the burden of NCDs constitute one of the major challenges for development in the 21st century?

Every year 13.8 million die prematurely from NCDs between ages 30 and 70

Source: WHO Global Burden of Disease (2011)
85% of premature deaths from NCDs between the ages of 30 and 70 occur in developing countries, resulting in 11.8 million deaths.
NCDs and impact on developing countries

Premature mortality from NCDs: probability of dying from the 4 main NCDs between ages 30 and 70, 2012

Percentage of deaths (%)
- <15
- 15–19
- 20–24
- ≥25
- Data not available
- Not applicable

Source: Global health estimates, 2013. World Health Organization
Premature Mortality from NCDs by WHO Region: Probability of dying between the ages of 30 and 70

Premature Mortality from NCDs in SEAR: Probability of dying between the ages of 30 and 70

Source: WHO Global Health Observatory
TOBACCO BURDEN
Tobacco use is a risk factor for six of the eight leading causes of death in the world.
The Region is among the major producers and consumers of tobacco and tobacco products.

About 250 million smokers and the same number of smokeless tobacco users reside in the Region.

Every year about 1.3 million die due to tobacco use in the Region.
Indigenous smoking
Products include:
  • bidi,
  • cheroots
  • kretesks
  • roll-your-own cigarettes
  • hookahs
  • water-pipes etc.
Smokeless tobacco products impose huge challenges on tobacco regulation such as taxation and pictorial health warnings.
Estimated prevalence of current tobacco and cigarette smoking by WHO region, 2011
Current Tobacco Smoking among Adults, SEAR

**Source:** Global Tobacco Control Report 2013

*DPR of Korea: daily tobacco smoking

*Source: Global Tobacco Control Report 2013*
Current Use of Smokeless Tobacco among Adults, SEAR

Source: Global Tobacco Control Report 2013
Current Tobacco Smoking among Youth 13-15 Years Old, SEAR

Source: Global Tobacco Control Report 2013
Current Use of Smokeless Tobacco among Youth 13-15 Years Old, SEAR

Source: Global Tobacco Control Report 2013
Proportion of Deaths Attributable to Tobacco in SEAR, ages 30 and over, 2004

Source: WHO Global Report, Mortality Attributable to Tobacco
COST-EFFECTIVE INTERVENTIONS FOR TOBACCO CONTROL
The cost of inaction on NCDs versus cost of action

US$ 7T is the cumulative lost output in developing countries associated with NCDs between 2011-2025.

US$ 170B is the overall cost for all developing countries to scale up action by implementing a set of "best buy" interventions between 2011 and 2025, identified as priority actions by WHO.

Reports are available at www.who.int/ncd
## The Cost of Scaling up Best Buy Interventions for Tobacco Control (MPOWER)

### Estimates for the average annual cost of tobacco control best buy interventions in all low- and middle-income countries (US$ 2008)

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Total annual cost (US$)</th>
<th>Annual cost per person (US$)</th>
<th>Share of cost (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Strategy Development</td>
<td>64,252,725</td>
<td>0.011</td>
<td>10%</td>
</tr>
<tr>
<td>Smoke-free policies</td>
<td>87,953,502</td>
<td>0.016</td>
<td>14%</td>
</tr>
<tr>
<td>Raise tobacco taxes</td>
<td>28,506,069</td>
<td>0.005</td>
<td>5%</td>
</tr>
<tr>
<td>Package warnings</td>
<td>40,705,857</td>
<td>0.007</td>
<td>7%</td>
</tr>
<tr>
<td>Advertising bans</td>
<td>45,062,561</td>
<td>0.008</td>
<td>7%</td>
</tr>
<tr>
<td>Media campaigns</td>
<td>353,639,300</td>
<td>0.062</td>
<td>57%</td>
</tr>
<tr>
<td>Total</td>
<td>620,120,015</td>
<td>0.110</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resource category</th>
<th>Total annual cost (US$)</th>
<th>Annual cost per person (US$)</th>
<th>Share of cost (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human resources</td>
<td>232,474,950</td>
<td>0.041</td>
<td>37%</td>
</tr>
<tr>
<td>Training</td>
<td>20,056,233</td>
<td>0.004</td>
<td>3%</td>
</tr>
<tr>
<td>Meetings</td>
<td>8,277,164</td>
<td>0.001</td>
<td>1%</td>
</tr>
<tr>
<td>Mass media</td>
<td>337,984,848</td>
<td>0.060</td>
<td>55%</td>
</tr>
<tr>
<td>Supplies and Equipment</td>
<td>16,694,112</td>
<td>0.003</td>
<td>3%</td>
</tr>
<tr>
<td>Other programme costs</td>
<td>4,692,708</td>
<td>0.001</td>
<td>1%</td>
</tr>
<tr>
<td>Total</td>
<td>620,120,015</td>
<td>0.110</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Source: Scaling up action against noncommunicable diseases: How much will it cost?, WHO 2011*
The Cost of Tobacco Use – Bangladesh Example

**Health Costs**

- **9%** of adults ages 30 and older have at least one of 8 tobacco-related diseases

- **29%** of inpatients ages 30 years and older have at least 1 of 8 tobacco-related diseases

- **9%** of all deaths are caused by tobacco

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**Economic Costs**

- **27.4 billion taka** is the cost of illnesses caused by tobacco

- **24.8 billion taka** is the benefit from the tobacco sector
  - 20.3 billion taka in tax revenue on domestic tobacco use
  - 4.5 billion taka in tobacco production wages

*Source: Impact of Tobacco related Illnesses in Bangladesh, WHO 2005*
The WHO Global NCD Action Plan 2013-2020 unites governments, international partners and WHO around a common agenda

**Vision:**
A world free of the avoidable burden of NCDs

**Goal:**
To reduce the preventable and avoidable burden of morbidity, mortality and disability due to NCDs by means of multisectoral collaboration and cooperation at national, regional and global levels
Nine voluntary global targets for the NCD prevention and control to be attained by 2025:

- Harmful use of alcohol: 10% reduction
- Physical inactivity: 10% reduction
- Salt/sodium intake: 30% reduction
- Tobacco use: 30% reduction
- Essential NCD medicines and technologies: 80% coverage
- Drug therapy and counseling: 50% coverage
- Diabetes/obesity: 0% increase
- Raised blood pressure: 25% reduction
- Premature mortality from NCDs: 25% reduction
### Risk Factors: What is next?

Implement interventions identified by WHO as "best buys" using WHO tools:

<table>
<thead>
<tr>
<th>Action Area</th>
<th>Tobacco use:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governance</td>
<td>- Tax increases</td>
</tr>
<tr>
<td>Risk factors</td>
<td>- Smoke-free indoor work places and public places</td>
</tr>
<tr>
<td>Health systems</td>
<td>- Health information and warnings about tobacco</td>
</tr>
<tr>
<td>Surveillance</td>
<td>- Bans on advertising and promotion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>Harmful use of alcohol:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governance</td>
<td>- Tax increases</td>
</tr>
<tr>
<td>Risk factors</td>
<td>- Comprehensive restrictions and bans on marketing</td>
</tr>
<tr>
<td>Health systems</td>
<td>- Restrictions on the availability of alcohol</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>Unhealthy diet and physical inactivity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveillance</td>
<td>- Mass media campaigns on salt reduction in processed foods</td>
</tr>
<tr>
<td>Risk factors</td>
<td>- Replacement of trans-fats with polyunsaturated fats</td>
</tr>
<tr>
<td>Health systems</td>
<td>- Public awareness about diet and physical activity</td>
</tr>
<tr>
<td>Governance</td>
<td>- Marketing of foods and non-alcoholic beverages to children</td>
</tr>
</tbody>
</table>
WHO FRAMEWORK CONVENTION ON TOBACCO CONTROL (WHO FCTC)

THREE WAYS TO SAVE LIVES.

This treaty is the world’s answer to the tobacco epidemic, which kills nearly 6 million people each year. Already legally binding in more than 170 countries, it’s our most powerful tobacco-control tool. Let’s use it!

31 MAY: WORLD NO TOBACCO DAY
WHO Framework Convention on Tobacco Control (WHO FCTC)

- First global health treaty negotiated under the auspices of WHO
  - establishes tobacco control as a priority on the public health agenda
  - provides an evidence-based tool for adoption of sound tobacco control measures
  - introduces a mechanism for firm country commitment and accountability

179 parties to the WHO FCTC globally

- Entry into force 27 Feb 2005
The Core Substantive Provisions of the WHO FCTC

- Price and tax measures to reduce the demand for tobacco, and
- Non-price measures to reduce the demand for tobacco, namely:
  - Protection from exposure to tobacco smoke;
  - Regulation of the contents of tobacco products;
  - Regulation of tobacco product disclosures;
  - Packaging and labelling of tobacco products;
  - Education, communication, training and public awareness;
  - Tobacco advertising, promotion and sponsorship; and,
  - Demand reduction measures concerning tobacco dependence and cessation.

- The core supply reduction provisions in the WHO FCTC are contained in articles 15-17:
  - Illicit trade in tobacco products;
  - Sales to and by minors; and,
  - Provision of support for economically viable alternative activities.
WHO FCTC in South-East Asia

- 10 SEA countries have ratified
- Some of the Member States are among early ratifiers
- 10 countries have tobacco control laws
- Timor-Leste have provisions for tobacco control and in the process of developing comprehensive laws
Protocol to Eliminate Illicit Trade in Tobacco Products:
New Instrument for Enhancing Tobacco Control

• The first Protocol to the Convention
  ✔ Adopted on 12 November 2012 at the 5th session of the COP in Seoul, Republic of Korea

• The Protocol was open for signature by all Parties to the WHO FCTC from 10 January 2013 until 9 January 2014. When it was closed for signature, the Protocol had been signed by 53 States and the European Union

• Myanmar is the only SEAR signatory.

• Nicaragua is the first party to the protocol.

• Treaty aims at eliminating all forms of illicit trade in tobacco products by requiring Parties to take measures to control the supply chain of tobacco products effectively and to cooperate internationally.
MPOWER package - a tool to assist countries with WHO FCTC
- Best buy / Good buy measures to reduce tobacco use

Monitor tobacco use and prevention policies → Article 20
Protect people from tobacco smoke → Article 8
Offer help to quit tobacco use → Article 14
Warn about the dangers of tobacco → Articles 11 & 12
Enforce bans on tobacco advertising, promotion and sponsorship → Article 13
Raise taxes on tobacco → Article 6
Effective policy reduces smoking-related deaths
The evidence from 41 countries

Today 2.3 billion people are protected by at least one demand reduction measure fully put in place by their government, up from 1 billion in 2007.

*WHO report on the global tobacco epidemic, 2013*
Status of MPOWER measures in 2012

Number of highest achieving countries

Source: Global Tobacco Control Report, 2012
Status of select tobacco control measures (MPOWER), SEAR MONITORING

India, Thailand

Bangladesh, Indonesia, Myanmar, Nepal

Bhutan, Maldives, Sri Lanka, Timor-Leste

Democratic People's Republic of Korea

Recent (from 2007 or later), representative of the national population, and periodic (collected at least every 5 years) data for both adults and youth

Recent and representative data for both adults and youth

Recent and representative data for either adults or youth

No known data or no recent data or data that are not both recent and representative

*Source: WHO Report on the Global Tobacco Epidemic, 2013*
Status of select tobacco control measures (MPOWER), SEAR Existence of SMOKE FREE Policies and Reported Compliance

All public places smoke-free
- Bhutan (8)
- Nepal (6)
- Thailand (7)

Six to seven public places completely smoke-free
- Sri Lanka (10)

Three to five public places completely smoke-free
- DPR of Korea (…)
- Indonesia (3)
- Maldives (…)
- Myanmar (5)

Up to two public places completely smoke-free
- Bangladesh (3)
- Timor-Leste (1)

Data not reported or not categorized
- India (5)

(Reported compliance in parenthesis)

Status of select tobacco control measures (MPOWER), SEAR CESSATION PROGRAMMES

- Thailand
- DPR of Korea, India
- Bangladesh, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka
- Bhutan, Timor-Leste

Status of select tobacco control measures (MPOWER), SEAR

HEALTH WARNINGS

- Nepal, Sri Lanka, Thailand
- Indonesia
- Bangladesh, Maldives
- Bhutan, DPR of Korea, India, Myanmar, Timor-Leste

Large warnings with all appropriate characteristics
Medium size warnings with all characteristics OR large warnings missing some characteristics
Medium size warnings missing some characteristics OR large warnings missing many characteristics
No warnings or small warnings

Status of select tobacco control measures (MPOWER), SEAR

MASS MEDIA WARNINGS

- Bangladesh, Bhutan, India
- DPR of Korea, Nepal, Thailand
- Myanmar
- Indonesia, Sri Lanka, Timor-Leste
- Maldives

National campaign conducted with at least seven appropriate characteristics including airing on television and or radio

National campaign conducted with 5 to 6 characteristics, or with 7 characteristics excluding airing on television and or radio

National campaign conducted with one to four characteristics

No national campaign between Jan 2011 and June 2012 with a duration of at least 3 weeks

Data not reported

Status of select tobacco control measures (MPOWER), SEAR TAPS BANS and Reported Compliance

- Maldives (5)
- Bangladesh (8), Bhutan (8), India (5), Myanmar (6), Nepal (8), Sri Lanka (9), Thailand (6)
- DPR of Korea (-), Indonesia (…), Timor-Leste (-)

Ban on all forms of direct and indirect advertising
Ban on national TV, radio, and print media as well as some other forms of direct and or indirect advertising
Ban on national television, radio and print media only
Complete absence of a ban, or ban that does not cover national TV, radio, and print media

(Reported compliance in parenthesis)

Status of select tobacco control measures (MPOWER), SEAR TAXATION

- Bangladesh, Indonesia, Sri Lanka, Thailand
- India, Maldives, Myanmar, Nepal, Timor-Leste
- Bhutan, DPR of Korea

Data not reported

Impact of WHO FCTC on Smoking Rates

PRE-WHO FCTC

POST-WHO FCTC

PREVALENCE OF SMOKING


AUSTRALIA
IRELAND
NEW ZEALAND
UK
TURKEY
URUGUAY
Many countries have succeeded in reducing smoking prevalence dramatically over a short period of time.

Countries with at least three MPOWER measures in place at the highest level of achievement by 2010.
Turkey
13% Relative Reduction in Smoking Prevalence after Comprehensive Tobacco Control

Decline in current smoking

Year

0 5 10 15 20 25 30 35 40
% 2008 2012

Highest level of achievement

- **Art 22** - Recent and nationally representative data
- **Art 8** - Comprehensive smoke-free legislation
- **Art 14** - National quit line, and both NRT and some cessation services cost-covered
- **Art 11 / 12** - Large warnings with all appropriate characteristics and National campaign
- **Art 13** - Ban on all forms of direct and indirect advertising
- **Art 6** - Tobacco taxes 81% of the retail price.
Thailand

- 82% of smokers have thought regularly about smoking’s harm during the past month
- Larger and graphic warning labels increase efficacy
- Smokers strongly support 100% smoke-free public places.
- 75% support complete ban on workplace smoking
- 90% support complete ban on restaurant smoking

Bangladesh

- A 10% increase in cigarette price is expected to decrease cigarette use by 4.9%
- 65% of current cigarette smokers in 2012 supported a tax increase on cigarettes
- Tiered tax system might enable smokers to change to cheaper brands instead of lowering usage

Source: ITC Thailand Summary, February 2009

Source: ITC Tobacco Price and Taxation Policies in Bangladesh 2014
### Impact of achieving targets on premature (30-70 years) NCD deaths

**Kontis et al. Lancet 2014**

#### Number of deaths in 2010

<table>
<thead>
<tr>
<th>Condition</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ischaemic heart disease</td>
<td>5.2 million</td>
<td>2.6 million</td>
</tr>
<tr>
<td>Stroke</td>
<td>3.9 million</td>
<td>2.1 million</td>
</tr>
<tr>
<td>Hypertensive heart disease</td>
<td>4.3 million</td>
<td>2.7 million</td>
</tr>
<tr>
<td>Other cardiovascular diseases</td>
<td>3.1 million</td>
<td>1.7 million</td>
</tr>
<tr>
<td>Lung cancer</td>
<td>0.9 million</td>
<td>0.5 million</td>
</tr>
<tr>
<td>Liver cancer</td>
<td>0.8 million</td>
<td>0.4 million</td>
</tr>
<tr>
<td>Stomach cancer</td>
<td>0.7 million</td>
<td>0.3 million</td>
</tr>
<tr>
<td>Breast cancer</td>
<td>0.5 million</td>
<td>0.3 million</td>
</tr>
<tr>
<td>COPD</td>
<td>0.4 million</td>
<td>0.2 million</td>
</tr>
<tr>
<td>Other chronic respiratory diseases</td>
<td>0.3 million</td>
<td>0.2 million</td>
</tr>
<tr>
<td>Colon cancer</td>
<td>0.2 million</td>
<td>0.1 million</td>
</tr>
<tr>
<td>Other cancers</td>
<td>0.1 million</td>
<td>0.1 million</td>
</tr>
</tbody>
</table>

**16.1 million deaths delayed/prevented**
The importance of early action on NCD risk factors

Kontis et al. *Lancet* 2014
We, Heads of State and Government and representatives of States and Governments, assembled at the United Nations from 19 to 20 September 2011, to address the prevention and control of non-communicable diseases worldwide, with a particular focus on developmental and other challenges and social and economic impacts, particularly for developing countries,

38. Recognize the fundamental conflict of interest between the tobacco industry and public health;

43.(c) We therefore commit to:
Accelerate implementation by States parties of the WHO Framework Convention on Tobacco Control
• 3.4 by 2030 reduce by one-third pre-mature mortality from non-communicable diseases (NCDs) through prevention and treatment, and promote mental health and wellbeing
• 3.5 strengthen prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol
• 3.6 by 2020 halve global deaths and injuries from road traffic accidents
• 3.a strengthen implementation of the Framework Convention on Tobacco Control in all countries as appropriate
Thank you

For any questions
bettcherd@who.int