Global Tobacco Use: Current Status and Future Challenges

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American Cancer Society
Washington, DC

National Cancer Advisory Board – February 27, 2014
Preaching to the Converted
Singing to the Choir
Carrying Coals to Newcastle
“...With respect to modifiable risk factors for cancer, there is a consensus that tobacco use remains, by far, the most important at a global level”

Varmus and Kumar, 2013
“…It is easy to lose sight of the role that research has played in bringing international tobacco control to the fore.”

Ken Warner, 2005
CAMEL

Winston

LUCKY STRIKE

AN AMERICAN ORIGINAL

Western-made cigarettes are among the most visible images in Moscow.
The Disease Consequences of Tobacco Use Are Universal
FORMS of TOBACCO

- Cigarettes
- Smokeless tobacco (chewing tobacco, oral snuff)
- Pipes
- Cigars
- Clove cigarettes
- Bidis
- Hookah (waterpipe smoking)
- Electronic cigarettes ("e-cigarettes")*

* Image courtesy of the Centers for Disease Control and Prevention / Rick Ward
Global Smoking Prevalence

- There are currently 1.3 billion smokers in the world – there will be 1.7 billion in 2025.

- Asia has the highest smoking rates in the world with overall country rates of up to 40%. China alone has over 300 million smokers who consume more than 1.7 trillion cigarettes a year – about 60% of the male population and 4% of the female population are smokers.

- One-third of the global population age 15 and older smokes.
Cigarette smoking is a 20\textsuperscript{th} century phenomenon...

Global Cigarette Consumption in One Century Increased Over 100 Times Counted in billions of cigarettes
Projected Deaths
Caused by Tobacco Use
During the 21st Century
Total 1 Billion

source: Tobacco Atlas, 4th edition; tobaccoatlas.org
Four Stages of the Tobacco Pandemic

Countries in each stage

STAGE 1
- Sub-Saharan Africa

STAGE 2
- China
- Japan
- Southeast Asia
- Latin America
- North Africa

STAGE 3
- Eastern Europe
- Southern Europe

STAGE 4
- Western Europe, UK
- USA
- Canada
- Australia

Distribution of world’s smokers

2000

- 36% Industrialized countries
- 64% Developing countries

2025

- 15% Industrialized countries
- 85% Developing countries

Cigarette consumption varies greatly by region...

- Consumption shifting from West to East (1990-2009)
  - Western Europe dropped 26%
  - Middle East and Africa increased 57%
Nearly 2/3 of the World’s Smokers Live in Just 10 Countries

More than 40% live in just 2 countries
Lung Cancer Incidence: Men
Incidence of Lung Cancer in Men by World Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of Cases per 100,000 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Europe</td>
<td>75.9</td>
</tr>
<tr>
<td>North America</td>
<td>69.6</td>
</tr>
<tr>
<td>Northern Europe</td>
<td>59.1</td>
</tr>
<tr>
<td>Southern Europe</td>
<td>58.8</td>
</tr>
<tr>
<td>Temp. South America</td>
<td>55.1</td>
</tr>
<tr>
<td>Western Europe</td>
<td>54.1</td>
</tr>
<tr>
<td>Micro/Poly</td>
<td>52.5</td>
</tr>
<tr>
<td>Australia/NZ</td>
<td>47.6</td>
</tr>
<tr>
<td>Other East Asia</td>
<td>40.4</td>
</tr>
<tr>
<td>Japan</td>
<td>38.9</td>
</tr>
<tr>
<td>China</td>
<td>34.7</td>
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<tr>
<td>Western Asia</td>
<td>30.5</td>
</tr>
<tr>
<td>Caribbean</td>
<td>29.8</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>29.7</td>
</tr>
<tr>
<td>Southern Africa</td>
<td>29.1</td>
</tr>
<tr>
<td>Trop. South America</td>
<td>24.1</td>
</tr>
<tr>
<td>Central America</td>
<td>19.3</td>
</tr>
<tr>
<td>Northern Africa</td>
<td>12.9</td>
</tr>
<tr>
<td>South Central Asia</td>
<td>12.0</td>
</tr>
<tr>
<td>Melanesia</td>
<td>7.8</td>
</tr>
<tr>
<td>Middle Africa</td>
<td>6.5</td>
</tr>
<tr>
<td>Eastern Africa</td>
<td>4.9</td>
</tr>
<tr>
<td>Western Africa</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Micro/Poly=Micronesia/Polynesia; NZ=New Zealand; Temp=Temperate; Trop=Tropical.
Adapted from Parkin et al. CA Cancer J Clin. 1999;49(1):33-64.
Incidence of Lung Cancer in Women by World Region

- North America: 20.2
- Northern Europe: 17.3
- Micro/Poly: 13.4
- Australia/NZ: 16.1
- China: 11.6
- Other East Asia: 11.2
- Japan: 10.3
- Eastern Europe: 10.1
- Caribbean: 9.3
- Southeast Asia: 8.2
- Western Europe: 7.9
- Central America: 7.7
- Southern Africa: 7.6
- Temp. South America: 7.6
- Southern Europe: 7.3
- Trop. South America: 7.2
- Western Asia: 5.2
- Melanesia: 3.7
- Northern Africa: 2.6
- South Central Asia: 2.6
- Eastern Africa: 2.0
- Western Africa: 0.9
- Middle Africa: 0.8

Number of cases per 100,000 population

Micro/Poly = Micronesia/Polynesia; NZ = New Zealand; Temp = Temperate; Trop = Tropical.

Projected Global Tobacco-Caused Deaths

By cause, 2015 baseline scenario

Totals might not sum due to rounding.

- 33% Malignant Neoplasms
  2,120,000
- 29% Respiratory Diseases
  1,870,000
- 29% Cardiovascular Diseases
  1,860,000
- 1% Tuberculosis
  90,000
- 2% Lower Respiratory Infections
  130,000
- 2% Diabetes Mellitus
  150,000
- 3% Digestive Diseases
  200,000

source: Tobacco Atlas, 4th edition; tobaccoatlas.org
“Forced smoking” kills people...

- 600,000 deaths annually from secondhand smoke exposure (mostly women and children)
- Over 50% of the people in the Western Pacific region are exposed to secondhand smoke (highest rate in the world)

Even limited secondhand smoke exposure delivers enough nicotine to the brain to alter its function.”

Nora Volkow, Director, National Institute on Drug Abuse, US, 2011

### Number of Global Deaths Caused by Secondhand Smoke in Nonsmokers

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>156,000</td>
<td>281,000</td>
<td>166,000</td>
</tr>
<tr>
<td>%</td>
<td>26%</td>
<td>47%</td>
<td>28%</td>
</tr>
</tbody>
</table>

75% of secondhand smoke deaths occur among women and children.
Economic Effects of Tobacco Use

- By 2015, the WHO estimates the annual global cost of tobacco to be US$500 billion – a figure higher than the GDP of 174 of 192 UN members.

- Smoking-related costs can contribute up to 15% of total health-care costs in developed countries.

- Japanese male smokers, for example, incur 11% more medical costs than never smokers and have increased inpatient medical-care costs 33% higher in smokers than never smokers.
Economic Effects of Tobacco Use (continued)

- As much as ten percent of family income in some parts of the world is spent on tobacco, limiting needed expenditures on food, clothing, education, and shelter.

- A 1996 study – 18 years ago – estimated that total annual medical and social costs of tobacco use in Hong Kong were one-quarter of the total healthcare budget – and prevalence has risen since then.

- For nearly 50% of the world’s population, a pack of Marlboros can cost approximately half of a family’s daily income.
Why Hasn’t Tobacco Control Received the Global Attention it Needs?

1) Tobacco use is viewed as a personal choice and a personal failing
2) Most victims of tobacco-related disease die and disappear quickly
3) Families and victims are often ashamed to discuss their tobacco use
4) The tobacco pandemic has developed slowly and insidiously
Why Hasn’t Tobacco Control Received the Global Attention it Needs? (continued)

5) Tobacco is old news
6) Few strong tobacco control advocacy groups have arisen
7) The global effects of tobacco use – health and economic – are not well known
8) The multinational tobacco companies have controlled the playing field
“Tobacco use is unlike other threats to global health. Infectious diseases do not employ multinational public relations firms. There are no front groups to promote the spread of cholera. Mosquitoes have no lobbyists.”

WHO Zeltner Report, 2000
Tobacco is very big business...

- Global cigarette market valued at almost half a trillion dollars (taxes excluded)
  - Comparable to GDP of Poland and Sweden
- CNTC manufactured 2.1 trillion of the world’s 5.9 trillion cigarettes (2008)
Thailand

Canada
Fumar causa câncer de pulmão

Esta necrose foi causada pelo consume do tabaco

[Smoking causes lung cancer]

Brazil

[This necrosis was caused by tobacco consumption]
Australian Plain Packaging
The Tobacco Industry Tries to Use Economic Agreements to Sell Cigarettes at the Expense of Health

Examples:

- Australia’s plain packaging legislation – challenged in the World Trade Organization (WTO) and the Australia-Hong Kong bilateral investment treaty (BIT).

- Uruguay’s warning labels and brand limitations challenged in the Switzerland-Uruguay BIT.
Framework Convention on Tobacco Control: The World's First Global Public Health Treaty

Objective: “to protect present and future generations from the devastating health, social, environmental and economic consequences of tobacco consumption and exposure to tobacco smoke”
Why is the FCTC important?

- The FCTC is the world’s first treaty to address a public health issue.
- The FCTC offers the best change to address tobacco control globally.
- The FCTC has, and will continue to, generate tobacco control advocacy in every country in the world.
The impossible has happened
What would be the effects of turning the tide against global tobacco use?

- As many as 200 million premature deaths will be avoided in the next 50 years.
- Lung cancer could virtually disappear as a public health menace.
- Global heart disease risks would be reduced by as much as 25%.
- Over time, global life expectancy could rise by 3-5 years.
- Trillions of dollars will be saved from healthcare expenditures and redirected to research and public health.
International Tobacco Control Research Criteria:

- Ability to influence population-level prevention/cessation
- Ability to address specific country/regional needs
- Ability to attract support for political and policy change
Broad International Tobacco Control Research Needs:

- Capacity building, i.e. infrastructure and training
- Funding (Gates/BI enormously useful, but not for research)
- Establishing political will
- Awareness/PR re enormity of tobacco’s effects – present/future
Specific International Tobacco Control Research Topics:

List is endless, but should include:

- FCTC implementation
- Price/tax increases
- Smokefree environments
- Surveillance
- Primacy of health in trade agreements
- Economic effects

- Access to tobacco dependence treatment
- Physician/health care provider tobacco use
- Tobacco package health warnings
- Media-based countermarketing campaigns
Specific International Tobacco Control Research Topics: (Continued)

- Regulatory schemes
- Targeting of women
- Targeting of youth
- Genetics of addiction
- Litigation effects
- Tobacco agriculture subsidies
- Tobacco crop substitution

- Illicit trade and smuggling
- Misleading claims/descriptors
- Duty-free and reduced-cost sales
- Advertising, promotions, and sponsorships
- Public education
Complementary Needs for International Tobacco Control Research

- Developing a new generation of tobacco control research leaders
- Raising the profile of tobacco control research on global health and development agendas
- Considering strategic alliances with NCD efforts
- Harnessing and integrating modern communications technology into global tobacco control research efforts
Complementary Needs for International Tobacco Control Research (Continued)

- Developing new and more sophisticated methods of tracking and countering the plans of the multinational tobacco companies
- Focusing more effort on linguistic needs and culturally-appropriate research
- Promoting the development of strong advocacy skills
- Obtaining additional resources, both financial and in-kind.
Proposal for a Global Consortium for Tobacco Control Research (GCTCR) – Varmus, Kumar, 2013

A GCTCR could:

- Provide an overarching structure for international research collaborations in LMICs specifically, but not exclusively;
- Aid in the development of research and communications networks;
- Facilitate the exchange and dissemination of information;
Promote the use of common measures and protocols to facilitate cross-regional comparisons;

Increase research capacity and infrastructure;

Serve a convening function; and

Promote tobacco control research as an essential element for development.
The 4 French heart transplant patients meet at the Palais de Chaillot
Thank you