Global Tobacco Control: Achievements And Challenges

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Celebration of the career of Prof. Simon Chapman
Sydney, 30 April 2015
My hero
Coverage

1. Tobacco consumption trends
2. Mortality consequences
3. What can be done? Tobacco Control 101
   a. Framework Convention on Tobacco Control
   b. Policy interventions: What works, what doesn’t
   c. What’s new?
4. Barriers to progress
5. Recent progress
What I won’t cover

Everything else
Global tobacco consumption

- ≈ 1 billion daily smokers ≥ 15 y-o
  - 820 million men ≈ 33% of men
  - 176 million women ≈ 7% of women

- 5.8 trillion cigarettes/year
  - = 830 per person per year (including children)

- ≈ 300 million smokeless tobacco users
  - Vast majority in India; variety of products

- + water pipe (hookah), e-cigs, etc.
Total cigarettes worldwide per year

Global Cigarette Consumption in One Century Increased Over 100 Times

Counted in billions of cigarettes

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<th>Year</th>
<th>Cigarettes</th>
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<td>5711</td>
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</table>
Global daily smoking prevalence: declining

Ng et al, JAMA 2014
Cigarette consumption by WHO region
(trillions of cigarettes per year)

- Avg. Chinese smoker = 22 cigs/day
- China > all other LMICs combined

Tobacco Atlas, 2015
Stages of the cigarette epidemic

Lopez et al., Tobacco Control, 1994
Smoking increasingly concentrated among...

- The poor
  - Across countries
  - Within countries

- The mentally ill
Global death toll from tobacco

- 6 million deaths/yr
  - > 10% of all deaths; + 600,000 from SHS

- > 8 million by 2030
  - > 80% in LMICs

- 100 million in 20th century

- 1 billion in 21st century *(if nothing changes)*

WHO, 2015
Smoking kills more people than all of the following combined:

- AIDS
- Alcohol
- Motor vehicle injuries
- Fires
- Heroin
- Cocaine
- Homicide
- Suicide

+ Shark attacks!
Major causes of death

- 90% of lung cancers
- 90% of COPD
- 33% of CVD in US; 10% worldwide
- Affects virtually every organ
Why is smoking so lethal?

- Sheer number of smokers, and amount they smoke (1 billion adult smokers, ≈ 15 cigs/day/adult)
- Addiction
- Chemical composition of smoke
  - > 7,000 chemical compounds
  - 70 known human carcinogens
Selected chemicals in cig. smoke

Acetone (solvent and paint stripper)
Ammonia (powerful and poisonous gas)
Arsenic (potent ant poison)
Benzene (poisonous toxin)
Butane (flammable chemical in lighter fluid)
Cadmium (employed in batteries)
Carbon monoxide (poisonous gas in auto exhaust)
Formaldehyde (preservative for dead bodies)
Hydrogen cyanide (deadly ingredient in rat poison)
Methanol (jet engine and rocket fuel)
Polonium-210 (radioactive element)
Toluene (poisonous industrial solvent)
Average smoker’s inhalation of these chemicals

- 10-12 puffs per cig on 15 cigs per day = 150-180 puffs per day

- Per year, implies 55,000 puffs on 5,475 cigs

- Per 50-year smoking “career,” implies 3 million puffs on > a quarter of a million cigarettes
What can be done? Tobacco Control 101

➢ 3 pillars of tobacco control:
  • *Prevention of initiation*
  • *Encouragement of and assistance with cessation*
  • *Protection from second-hand smoke*

➢ Use of evidence-based interventions

➢ Strategic selection of foci of efforts
  • *Prevention “vs.” cessation*
  • *Variation by region (e.g., Africa), stage of epidemic, and level of knowledge and TC policy*

➢ Novel “endgame” interventions?
Impact of prevention vs. cessation, 2000-2050

- Baseline tobacco related deaths
- If proportion of youth uptake halves by 2020
- If adult consumption halves by 2020

Year:
- 1950: 0
- 2000: 70
- 2025: 190
- 2050: 520

Tobacco deaths (million):
- 0
- 70
- 190
- 520
Framework Convention on Tobacco Control (FCTC)

- World’s first global health treaty
- Adopted in 2003; in force since 2005; ratified by 180 countries (90% of world’s population)
- Now developing specific protocols

I’m right about here.
(Can you see me?)
Evidence-based interventions: MPOWER

- Monitor tobacco use and prevention policies
- Protect people from secondhand smoke by establishing smoke-free environments
- Offer help to smokers who want to quit
- Warn about dangers of smoking
- Enforce bans on all advertising, promotion and sponsorships
- Raise taxes on tobacco
Effective policy interventions

- Taxation
- Smoke-free workplace laws
- Counter-advertising (media campaigns)
- Ad/promotion bans
Ineffective policy interventions

- School health education
- Old style warning labels
  - Whazat say?
- Minors’ possession, use, and purchase (PUP) laws
- Sales to minors laws
What’s new?
Graphic warning labels (GWLs)

- Now in ≈ 80 countries
- Originally 50% of front and back of pack
- New generation: 80+% of pack
- Early research is encouraging
- Industry lawsuits (Uruguay)
What’s newer?
Plain (standardized) packaging

- Australia first; now Ireland and UK; spread likely
- Court challenges
What could be newer still?

Endgame strategies

- Not-for-profit management of distribution and sale of tobacco products *(Australia, Canada)*
- Smoker’s license *(Australia)*
- Gradual reduction in supply (“sinking lid”) *(NZ)*
- Reduction of nicotine to nonaddicting level *(US)*
- Smoke-free generation *(Singapore)*
- Prohibition (“abolition”) *(US)*
Resources for tobacco control

- **Person-power**
  - Legacy of creative, effective scholars and advocates
  - ...but small numbers
  - Aging; need for “new blood”

- **Financial resources**
  - Few resources for FCTC
  - Significant resources in select developed countries (but vary over time)
  - Few resources in LMICs except...
  - Bloomberg and Gates: hundreds of millions of dollars for work in select LMICs
Barriers to progress

- Inherent attraction of smoking (nicotine addiction)
- Bureaucratic and legislative inertia and conservatism
- Philosophical objections; individual liberty concerns
- Insufficient trained, paid TC workforce
- And last, but decidedly not least...
A voracious, mendacious, powerful industry

- Enormous economic and hence political muscle
  - *Corruption in many countries*
- Buying loyalty from key organizations
- Disputing science
- Lawsuits
- Lies
The lying all began in January 1954

- “We believe the products we make are not injurious to health.”
- “We accept an interest in people's health as a basic responsibility, paramount to every other consideration in our business.”
- “We always have and always will cooperate closely with those whose task it is to safeguard the public health.”

(emphasis added)
Cost of failure

- Continuation of $\geq 6$ million deaths per year
- Same as 44 fully loaded 747 jets crashing every day of the year!
Is TC’s cup half full or half empty?

- It’s half full!
  - *Tobacco control = greatest life-saver in past half century in developed countries*
  - *In US, 8 million premature deaths averted*
  - *In world, total consumption leveled off, prevalence declining*

- It’s half empty!
  - *One-fifth of adults smoke; 6 million die each year*
  - *Number of deaths headed ↑ to 8 million/yr.*
  - *Prospects for important regulatory action in foreseeable future seem very small*

- But tobacco control full of surprises
In the past 10+ years

- Global cigarette consumption peaked
- Prevalence declining
- Global treaty, with new regulatory potential in individual countries
- From 0 to 34 smoke-free countries
- ≈ 80 countries with GWLs; plain packaging
- Flood of novel products, including e-cigs
- Recognition of dominance of low SES and mentally ill in smoking population
- New focus on eliminating use of combusted tobacco
- New conversation re tobacco endgame
10 years from now...
Thank you, Simon!