



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

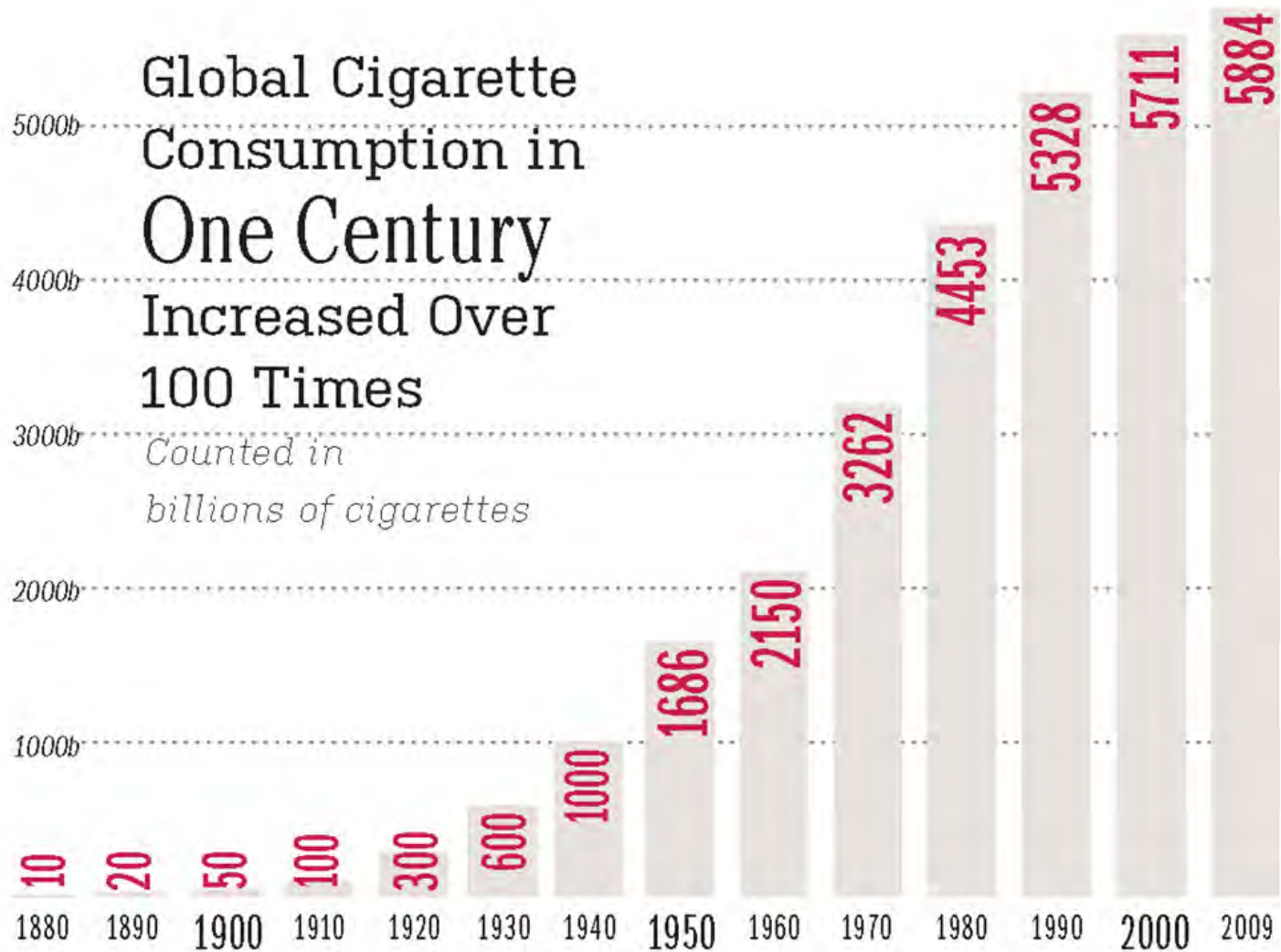
Everything else

Global tobacco consumption

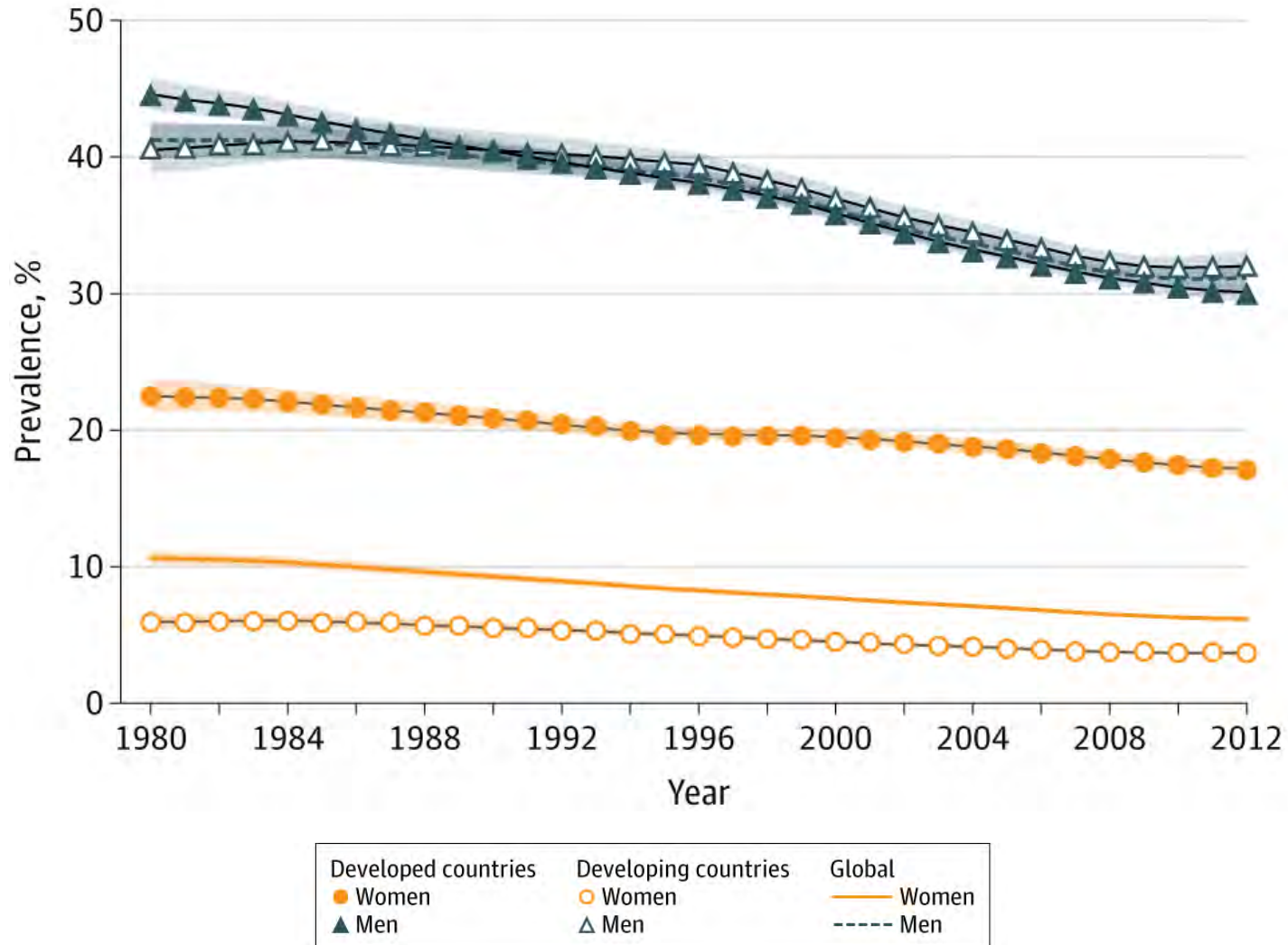
- \approx 1 billion daily smokers \geq 15 y-o
 - *820 million men \approx 33% of men*
 - *176 million women \approx 7% of women*
- 5.8 trillion cigarettes/year
 - *= 830 per person per year (including children)*
- \approx 300 million smokeless tobacco users
 - *Vast majority in India; variety of products*
- + water pipe (hookah), e-cigs, etc.



Total cigarettes worldwide per year

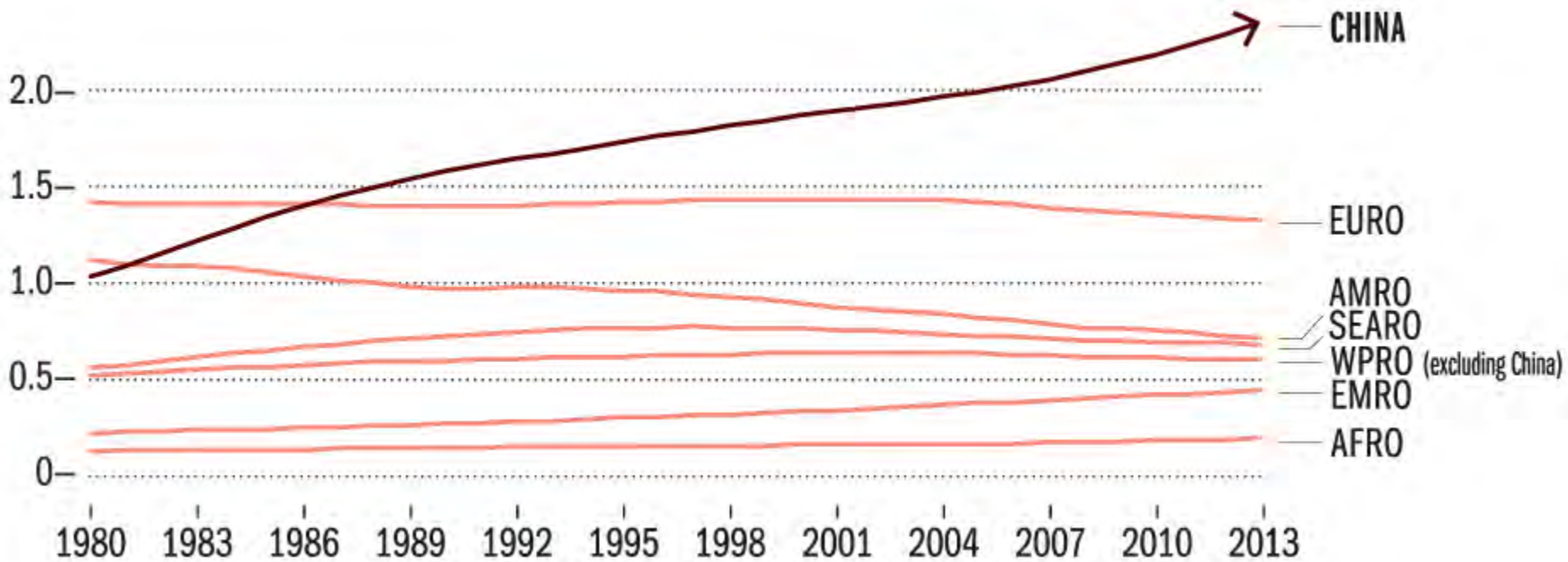


Global daily smoking prevalence: declining



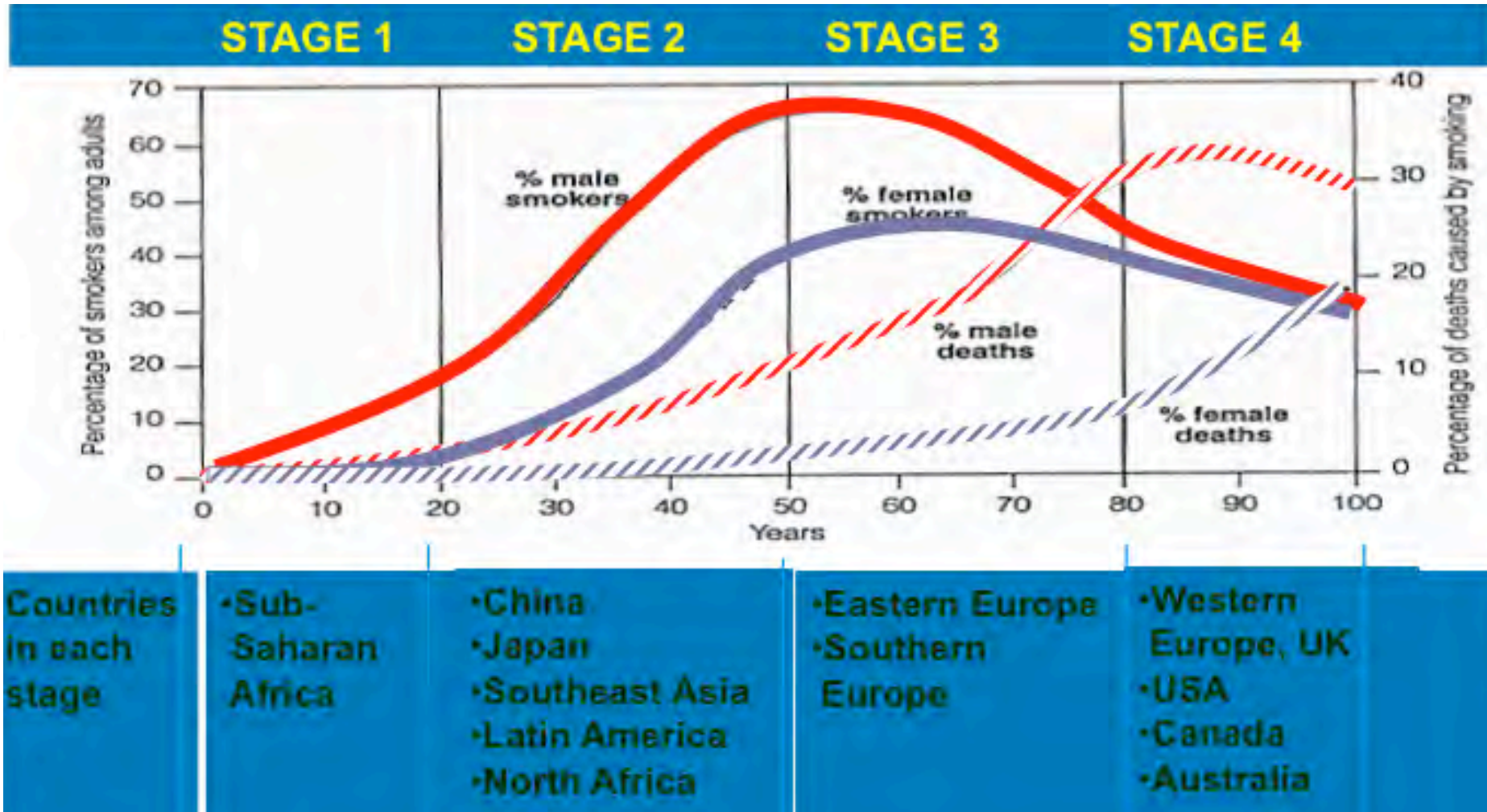
Cigarette consumption by WHO region

(trillions of cigarettes per year)



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

Stages of the cigarette epidemic

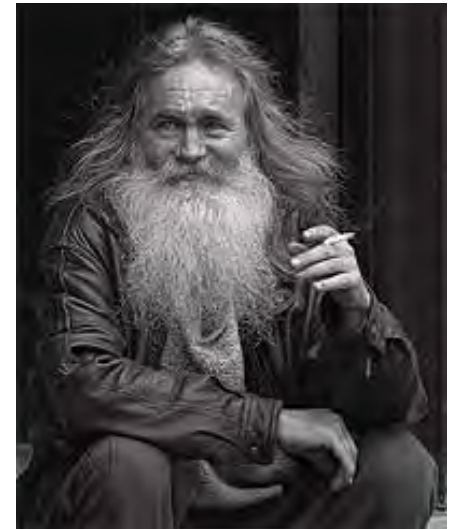


Lopez et al., *Tobacco Control*, 1994

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*)



Smoking kills more people than all of the following combined:



AIDS



Motor vehicle injuries



Heroin

Homicide



+ Shark attacks!

Alcohol



Fires

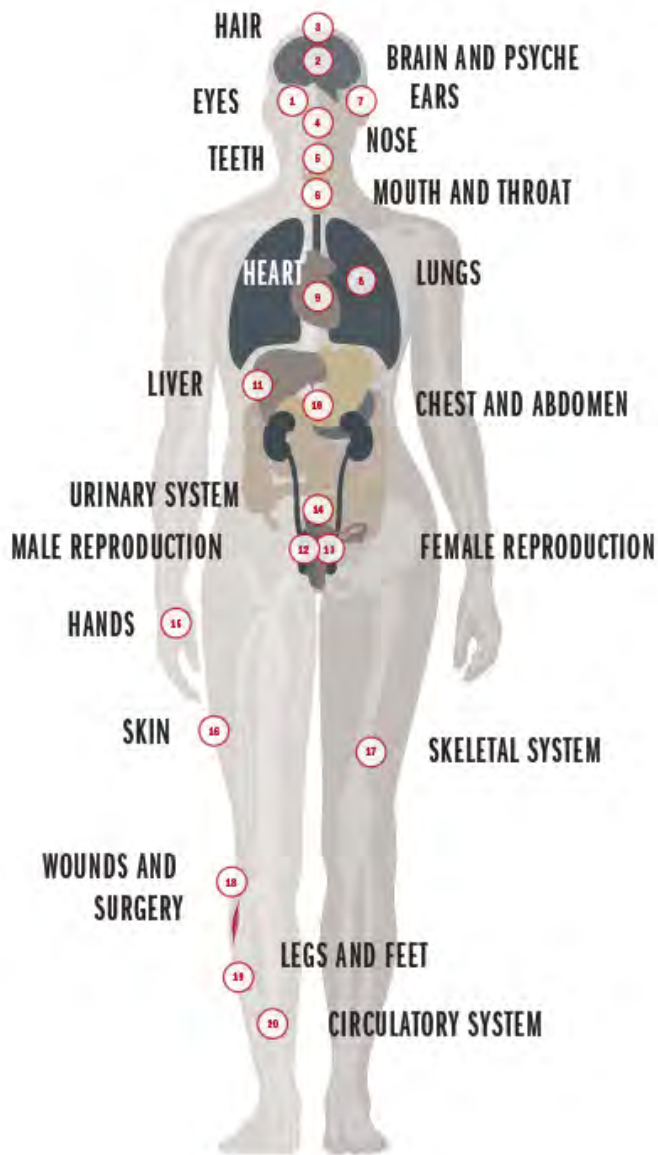


Cocaine



Suicide





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*)

Hydrogen Cyanide

hydrocyanic acid; prussic acid;
anhydrous hydrogen cyanide

DANGER! POISON! FLAMMABLE!



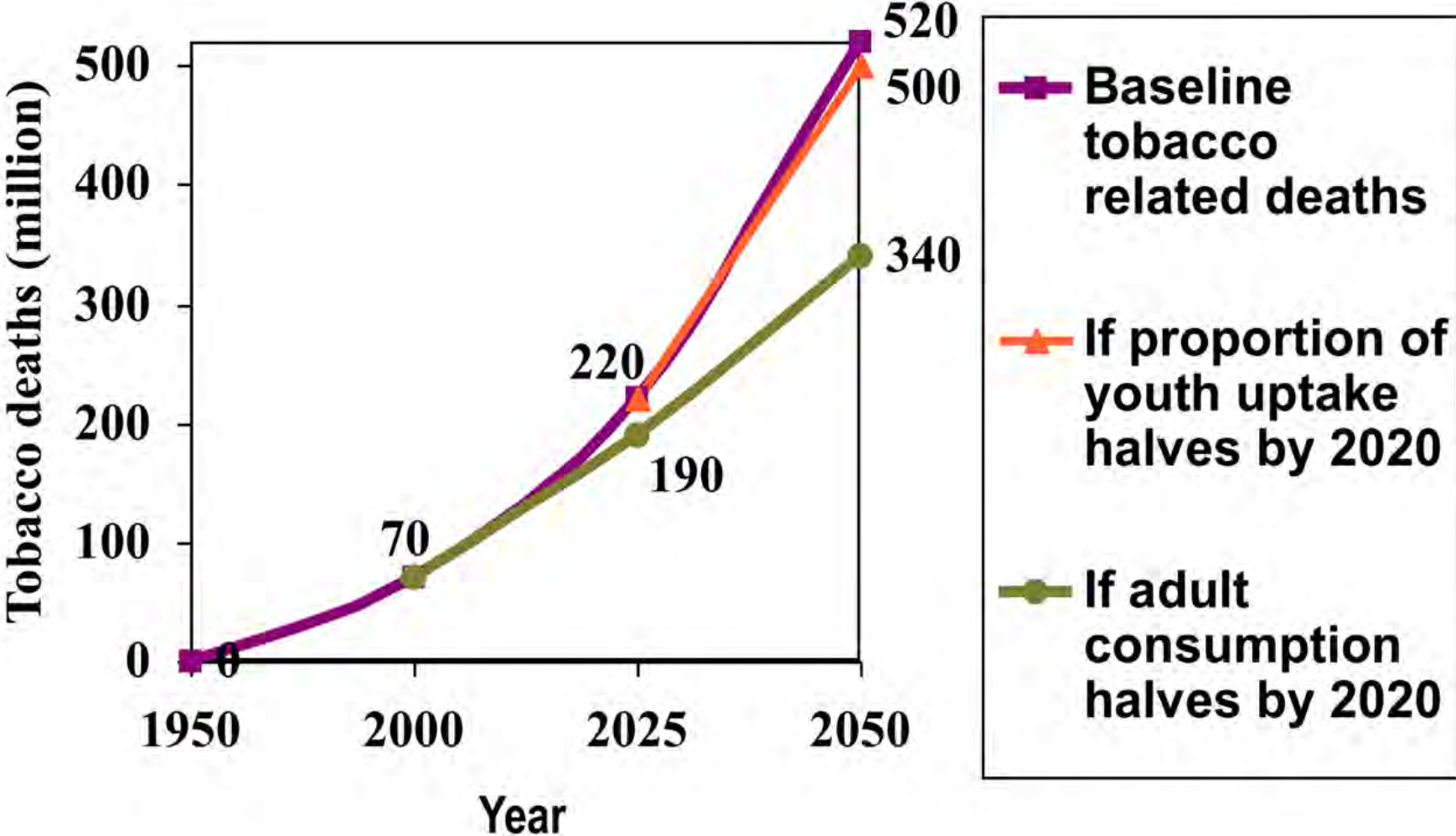
Average smoker's inhalation of these chemicals

- 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



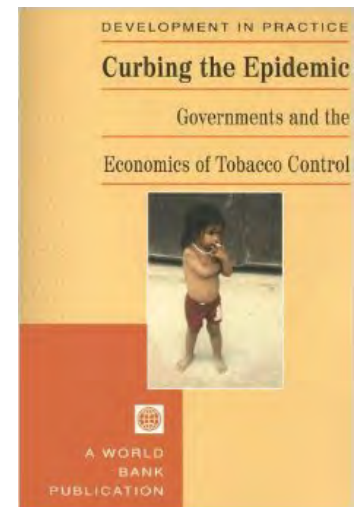
Framework Convention on Tobacco Control (FCTC)



- 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

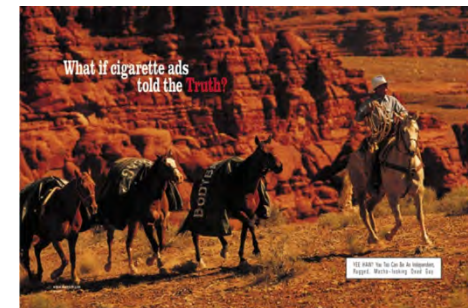
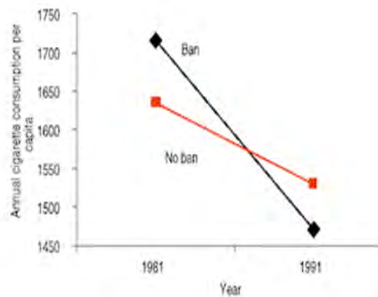
- **Monitor** tobacco use and prevention policies
- **Protect** people from secondhand smoke by establishing smoke-free environments
- **Offer** help to smokers who want to quit
- **Warn** about dangers of smoking
- **Enforce** bans on all advertising, promotion and sponsorships
- **Raise** taxes on 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 \approx 80 countries
- Originally 50% of front and back of pack
- New generation: 80+% of pack
- Early research is encouraging
- Industry lawsuits (Uruguay)



Marlboros in Brunei

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)

A Frank Statement to Cigarette Smokers

RECENT REPORTS on experiments with mice have given wide publicity to a theory that cigarette smoking is in some way linked with lung cancer in human beings.

Although conducted by doctors of professional standing, these experiments are not regarded as conclusive in the field of cancer research. However, we do not believe that any serious medical research, even though its results are inconclusive should be disregarded or lightly dismissed.

At the same time, we feel it is in the public interest to call attention to the fact that eminent doctors and research scientists have publicly questioned the claimed significance of these experiments.

Distinguished authorities point out:

1. That medical research of recent years limits many possible causes of lung cancer.

2. That there is no agreement among the authorities regarding what the cause is.

3. That there is no proof that cigarette smoking is one of the causes.

4. That statistics purporting to link cigarette smoking with the disease could apply with equal force to any one of many other aspects of modern life. Indeed the validity of the statistics themselves is questioned by numerous scientists.

We accept an interest in people's health as a basic responsibility, paramount to every other consideration in our business.

We believe the products we make are not injurious to health.

We always have and always will cooperate closely with those whose task it is to safeguard the public health.

For more than 300 years tobacco has given us pleasure, relaxation, and enjoyment to mankind. At one time or another during those years critics have held it responsible for practically every disease of the human body. One by one these charges have been abandoned for lack of evidence.

Regardless of the record of the past, the fact that cigarette smoking today should even be suspected as a cause of a serious disease is a matter of deep concern to us.

Many people have asked us what we are doing to meet the public's concern aroused by the recent reports. Here is the answer:

1. We are pledging aid and assistance to the research effort in all phases of tobacco use and health. This joint financial aid will of course be in addition to what is already being contributed by individual companies.

2. For this purpose we are establishing a joint industry group consisting initially of the undersigned. This group will be known as TOBACCO INDUSTRY RESEARCH COMMITTEE.

3. In charge of the research activities of the Committee will be a scientist of unimpeachable integrity and national reputation. In addition there will be an Advisory Board of scientists distinguished in the cigarette industry. A group of distinguished men from medicine, science, and education will be invited to serve on this Board. These scientists will advise the Committee on its research activities.

This statement is being issued because we believe the people are entitled to know where we stand on this matter and what we intend to do about it.

TOBACCO INDUSTRY RESEARCH COMMITTEE

5322 EMPIRE STATE BUILDING, NEW YORK 1, N. Y.

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Cost of failure

- Continuation of ≥ 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!

