

# ***Confronting the Epidemic:***

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## **A Global Agenda for Tobacco Control Research**

July 1999  
Geneva, Switzerland



World Health Organization



Research for International Tobacco Control



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**I. Introduction**

A global agenda for research on tobacco control is needed to underpin policy development. Over the last 18 months, such an agenda has been developed in close partnership with researchers and policy-makers from developing countries, international donors, and research bodies with global mandates. The agenda set out below has been endorsed by participants at the most recent session of the Global Forum for Health Research (Geneva, June 1999), and by a meeting on Global Research Priorities for Tobacco Control, co-hosted by Research for International Tobacco Control (RITC) and the World Health Organization (WHO), held in Washington, DC, USA, in March 1999.

**II. The impact of tobacco**

The tobacco epidemic poses a growing threat to health, the economy and environmental stability worldwide. Although tobacco use prevalence rates have decreased somewhat among adults in some parts of the developed world, rates among children and adolescents in these countries have increased, reversing public health gains observed during the 1970s and 1980s.

Tobacco companies are vigorously targeting potential markets in developing countries, where male smoking rates are already very high and traditional cultural prohibitions on women's smoking are disappearing in the wake of globalization. In 1998, some 7.5% of the world's 53.9 million deaths were attributable to tobacco use. By 2030, if present smoking patterns continue, that number will

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rise to 10 million deaths annually - roughly equal to the current combined mortality from diarrhoeal diseases, malaria, pneumonia and tuberculosis. Seventy per cent of the annual increase is expected to occur in developing countries. In developed countries, it is estimated that half of the deaths will be in productive and socially important middle age from 35 to 69 years.

Most health consequences of smoking are not manifested until three to four decades after the onset of persistent smoking. As 50% of men in developing countries are smokers and cigarette consumption is steadily rising in these countries, tobacco is predicted to be one of the major causes of death and disability-adjusted life years (DALYs) in the next century.

Smoking has been significantly associated with 25 causes of death. The major ones include a range of cancers, heart and respiratory disease. Smoking during pregnancy increases babies' risk of low birth weight and results in other perinatal complications that are particularly hazardous for women. Exposure to environmental tobacco smoke (ETS) can cause lung cancer in otherwise healthy nonsmokers and has a particularly harmful impact on children's respiratory health.

The net economic costs of tobacco are profoundly negative. Globally, the health care costs of smoking range from about 0.7% to 2% of GDP. In the USA, the costs of smoking are estimated to be responsible for between 6% and 10% of that country's medical care expenditures.

In addition, fires caused by cigarettes cause millions of dollars in damage. The environment is being polluted by discarded cigarette butts and packaging, which have poor biodegradability. Pesticides and fertilizers used on the tobacco crop contaminate the soil and water sources. Vast numbers of trees are cut down to provide fuel for curing tobacco products and cellulose for packaging materials. Deforestation results in high rates of soil erosion and sun-baked, infertile soils. While country-specific data are lacking, earnings

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from tobacco crops are not necessarily commensurate with the time and work invested. Farmers often believe that they have few other options.

### **III. Investment and potential for research**

Global funding for tobacco control research continues to be woefully inadequate, particularly when compared to a \$400 billion<sup>1</sup> industry that promotes tobacco products. International tobacco control research has attracted only minimal funding, although opportunities abound for increased funding and collaboration with multilateral and bilateral sources. In 1997, the United States Government spent about \$500 million on tobacco control research. In the same year, it spent \$680 million on research to improve tobacco farming.

An accurate figure for global spending on tobacco control research (as opposed to funding available in a few developed countries) is probably somewhere under \$15 million a year. This figure is several orders of magnitude below that available for problems with substantially less impact on global public health.

### **IV. The time to act is now**

Never has tobacco control been more at the forefront of the global health agenda. In July 1998, the incoming Director-General of WHO, Dr. Gro Harlem Brundtland, established a Cabinet project - the Tobacco Free Initiative (TFI) - to coordinate an improved global strategic response to tobacco as a significant public health initiative. The goals of the Initiative will be accomplished through strong internal and external partnerships among WHO offices and with a wide range of organizations and institutions around the world.

Mobilization of human, institutional and financial resources will be critical to success in achieving these goals. The proposed adoption under WHO's auspices of a Framework Convention on

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<sup>1</sup> A billion = 1000 million.

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Tobacco Control can provide the impetus for legislative initiatives in developing countries.

In response to the Director-General's call to action, the World Bank and UNICEF have also identified tobacco use as a top-priority health problem and a threat to children's rights. A grant from the United Nations Foundation, combined with a commitment by WHO of funds from its regular budget, will support a joint WHO/UNICEF project to study the impact of tobacco use on children.

The World Bank has had a formal policy on tobacco since 1991, in recognition of the harm that tobacco does to health. The policy discourages lending for tobacco and encourages tobacco control initiatives. The pharmaceutical industry is emerging as an important research partner, and rapid increases in sales of pharmaceutical products to treat tobacco dependence are likely to fuel even greater investment in new and increasingly effective treatments.

Global perception of the tobacco industry has been tarnished in recent years through the unearthing of damaging industry documents and negative press coverage associated with litigation, particularly in the United States. The \$206 billion multi-state settlement achieved in the USA in November 1998 promises to ensure effective tobacco control programmes in every state as well as leading to renewed collaboration, networking and capacity-building. Tobacco control initiatives, including litigation, in the United States, Canada, India, Thailand and Europe have generated a wealth of tobacco control practitioners and advocates whose collective wisdom and experience can benefit both developed and developing countries.

In order to make progress in controlling the tobacco epidemic, it is essential for tobacco control policies and programmes to be based on strong scientific evidence. A serious and concerted effort is needed to strengthen global tobacco control research. Such an effort should include:

- advocacy for investment in research;

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- building sustainable capacity in developing countries;
  - targeting select priority themes; and
  - establishing appropriate institutional arrangements to move research forward.

## **V. Research themes**

The proposed research agenda set out below is a compilation of recommendations drawn from various symposia and reports. The various agendas showed a striking similarity. Some research issues are clearly country-specific while others have the potential to inform policy and practice internationally. The development of common protocols on key questions would facilitate research locally and the pooling of data globally.

### **1. Country-specific research**

The lack of standardized and comparable data is a recurrent theme. There is a need for surveillance systems to capture country and regional data on:

- prevalence of tobacco use and consumption patterns (particularly among young people and health professionals);
- patterns and trends in tobacco-attributable morbidity and mortality;
- level of awareness among different segments of the population of the health risks associated with tobacco use;
- pricing policies, backed by country and segment-specific elasticity studies to determine the impact of taxation on tobacco control;
- behaviours and attitudes with respect to tobacco control measures, to understand how social norms are formed and transmitted and to allow cross-cultural comparisons of regional and cultural differences in the acceptability of tobacco use.

### **2. Policy interventions**

Research is needed to determine the impact of tobacco control policies, including taxation and pricing, clean indoor air policies,

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restrictions on marketing, advertising and promotion, and restrictions on young people's access to tobacco. Specific research topics include:

**(a) Economic**

- Elasticity-of-demand studies to determine optimal levels of taxation according to social class, age and geographic conditions;
- the determinants, process and impact of illegal trafficking, and the influence of smuggling on tobacco use;
- opportunities for and barriers to the harmonization of prices at regional level.

**(b) Legislative**

- effect of international trade agreements on production, trade and marketing of tobacco products;
- empirical and theoretical research to assist in drafting, implementing and evaluating policies, including advertising bans.

**3. Programme interventions**

The global research agenda should be grounded in a comprehensive public health model of nicotine addiction that encompasses environment, agent, host and vector. Topics for research on possible interventions include:

- opportunities for/barriers to tobacco control;
- optimal components (programmes and policies) of a comprehensive tobacco control strategy;
- development of effective messages to counter tobacco industry promotions;
- behavioural research to test prevention and treatment programmes and sociocultural studies to elucidate differences in responsiveness to interventions among ethnic and cultural groups;
- development and evaluation of novel approaches to preventing tobacco use, especially among populations at disproportionate risk;

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- the relative effectiveness and consequences of prevention interventions that employ single-risk strategies versus multiple-risk strategies.

#### **4. Treatment of tobacco dependence**

Two broad research fields are of particular importance:

- examination of a range of approaches to increase the cessation rates in populations;
- evaluation of new pharmaceutical interventions and delivery mechanisms, their cost-effectiveness, and their impact in diverse sociocultural, physiological and genetic subgroups.

#### **5. Tobacco product design and regulation**

This research will seek to demonstrate how product modification (in nicotine/tar content, delivery system, additives, taste, size, etc.) can change use patterns and/or reduce harm among various subgroups. The following components are possible priorities:

- the biology of tobacco addiction;
- characterization of additives to tobacco products;
- examination of alternative labelling for tobacco products;
- examination of the public's expectations about tobacco products and people's behaviour with respect to new products;
- a basis for future decisions about nicotine and tar content derived from public health findings.

#### **6. Tobacco industry analysis**

In 1998, 35 million pages of documents from the internal files of the tobacco industry were made public through the landmark lawsuit brought against the tobacco industry by the Attorney General of Minnesota and Blue Cross and Blue Shield of Minnesota. These provide new and compelling evidence about the subversion of science by the tobacco industry; information about industry's intentions with regard to addiction, product design and marketing; and many other issues directly relevant to policy-makers. While some research on the tobacco industry will be country-specific,

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research on the international role of the transnational tobacco companies (TTCs) will also be important:

- overview of the ownership, corporate structure and regulation of the tobacco industry at both the local and international level, including dominant industry forces, manufacturing practices, alliances and trends in relative market share;
- tobacco and cigarette production as an international and regional trade issue in terms of foreign exchange earnings, employment, country imports and exports, and trafficking;
- tobacco industry relationships with governments (including lobbying activities);
- tobacco industry involvement in smuggling activities;
- tobacco industry advertising, marketing and promotion efforts (particularly with respect to women, youth and other high-risk groups), the impact of changes in advertising on consumption, and public perceptions of advertising and promotion by TTCs;
- industry representations about the health consequences of smoking and addiction (including their influence on the content and direction of research).

#### **7. Tobacco farming**

Many aspects of tobacco cultivation are poorly understood, including occupational hazards, environmental impact, economic benefits and sociocultural impact (particularly for women and children). Important research topics include:

- relationship of tobacco production to destruction of the ecosystem, particularly with respect to deforestation, pesticides and degradation of soil nutrients;
- attitudes, beliefs and practices of tobacco farmers and the underlying historical/cultural context;
- economic impact of tobacco control on developing countries that grow and manufacture tobacco or tobacco products for domestic or foreign markets;
- opportunities for alternative crops and alternative livelihoods: information on crop options for farmers and on employment outside tobacco growing for their children;

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- cultivation and curing practices at the country and subnational level;
  - occupational health hazards related to cultivating, curing and handling tobacco, including the use of pesticides, herbicides and fertilizers;
  - impact of tobacco cultivation on women and children;
  - the feasibility of diversification in countries heavily dependent on tobacco farming and tobacco manufacturing, and mechanisms for supporting these countries in their diversification efforts.

#### **8. Framework Convention on Tobacco Control (FCTC)**

Research data from the global agenda outlined above will be pivotal in providing technical assistance for the development and implementation of the proposed WHO Framework Convention. In addition, research is needed for:

##### **(a) *Development of the FCTC***

- elaboration of key elements of the FCTC, including guiding principles, general objectives and obligations;
- review of the relationship of potential elements of the FCTC and related protocols to existing international law;
- study of the relationship of potential elements of the FCTC and related protocols to common national constitutional provisions.

##### **(b) *FCTC: ratification, implementation, monitoring, and compliance***

- global political support: mechanisms to secure ratification and implementation;
- structure and design of monitoring mechanisms to be established by the FCTC and related protocols;
- verification of the effectiveness of the Convention.

#### **VI. Cross-cutting themes**

Cross-cutting research themes include a number of issues that will need to be taken into consideration in all thematic areas.

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## **1. High-Risk Populations (e.g. youth, women, indigenous populations)**

- identification of high-risk segments of the population - e.g. those with high or escalating rates of prevalence, youth as an entry point to tobacco use, others targeted by industry promotions;
- basic biobehavioural research to understand the sociocultural, psychological, physiological and genetic factors that influence the initiation of tobacco use, progression to nicotine addiction, and smoking cessation among high-risk segments of the population;
- studies on the influence of tobacco advertising and promotion, especially in high-risk groups;
- research to determine why some high-risk groups are resistant to interventions.

## **2. Country readiness**

- qualitative and quantitative research to assess each region/country's readiness for tobacco control measures as evidenced by indicators such as knowledge of health effects of tobacco use, support for interventions, and priority given to tobacco control by key opinion leaders, including politicians and health professionals.

## **3. Dissemination**

- research to provide a better understanding of how to translate knowledge into effective practice, particularly in policy development; (the research should include knowledge synthesis as well as methods for ensuring the dissemination, adoption, implementation and maintenance of strategies known to be effective);
- mechanisms for optimal dissemination of proven prevention and treatment interventions through different delivery channels at the local and national level;
- means of dissemination of the results of research to policy-makers.

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#### **4. Capacity development**

- assessment of capacity for tobacco control (including research), especially in areas not directly related to health such as economics and policy analysis;
- identification of researchers and research institutions tobacco control research, and of current stakeholders in tobacco control initiatives, their needs and activities, in order to relate research to policy, programme and practice needs.

#### **5. Mobilization of human and financial resources**

- concerted mobilization of human and financial resources in order to implement a comprehensive research agenda, build partnerships, and stimulate comparative research and analysis.

### **VII. Mechanisms for maximizing global expertise**

The development and implementation of regional and national tobacco control strategies in Canada and the United States have clearly demonstrated the effectiveness of an approach that is coordinated, collaborative and cooperative in order to maximize effort and avoid duplication. Both the Tobacco Control Research Initiative in Canada and the Tobacco Research Implementation Group in the United States are now applying the same approach to tobacco control research. They are also establishing a link between policy-makers and researchers to ensure that one sector informs the other.

A similar strategy is needed in other parts of the world. RITC is helping to develop regional tobacco control research networks in South and South-east Asia, Africa and Latin America. North-South links must also be established in order to profit from tobacco control experience in developed countries and to foster existing expertise and build capacity in developing countries. Researchers from developing countries can become directly involved in global research initiatives and conferences, and connectivity can be enhanced through virtual symposia on the Internet. Institutional

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linkages within countries and internationally would promote collaboration on particular issues and allow a multidisciplinary approach to more complex themes. Global collaboration would allow comparisons of unique populations and study conditions by means of standardized protocols.

The Tobacco Research Implementation Group of the United States National Institutes of Health has identified the creation of transdisciplinary tobacco control research centres as the highest priority for investment by the US National Cancer Institute. These centres would focus on thematic areas where there are significant gaps in knowledge. The collective effort at a centre could result in major advances in knowledge and its application as well as making important contributions to methodology. One of the most important functions of tobacco research centres would be their ability to train future tobacco research scientists who are knowledgeable about the need for and conduct of transdisciplinary research. This training is critical if the science of tobacco control is to be advanced. The framework planned for these transdisciplinary tobacco control research centres can serve as a model for worldwide implementation. The establishment of "Avirtual" research centres is possible through the Internet, allowing collaboration on a national or global level.

### **VIII. Resource mobilization**

Funding for tobacco control is clearly inadequate at both the institutional and global levels. It is imperative for funding levels to be increased and coordination between existing research initiatives to be strengthened. Funding for tobacco control research may be in the form of designated or pooled funds. Designated funds would remain within an institution but would contribute to the global agenda. Pooled funds would be coordinated through a central agency in order to facilitate multi-centre research initiatives. Funding partnerships should, where possible, include research institutions, voluntary organizations, foundations and private industry.

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Optimal funding levels for tobacco control research should be determined at both the institutional and global level and should be at least proportionate to the burden of disease attributable to tobacco use.

Because of the magnitude of the tobacco epidemic, tobacco control must take its rightful place among the priorities for global health. Similarly, tobacco research must become a significant component of the global health research agenda, which means that it is important for funding for tobacco control research to be increased. Significant gaps in information have been identified. The missing data are urgently required to provide a sound basis for the development of tobacco control policies and programmes needed to cut short the devastation brought about by tobacco use.

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